

# MASSACHUSETTS PLOUGHMAN



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## Agricultural.

### Good Roads.

The States, counties and towns are spending large sums of money in building good roads in certain sections, not only for the better accommodation of the traveling public and the better transportation of the products of those sections to market, but to increase the value of the farms near which they run by such improvements.

In nearly all cases these roads are built upon a modification of the MacAdam or the Telford principle, consisting of a foundation of large stones, then smaller stones and a coating of crushed stone when such material is available. When such work is once properly done these roads can be kept in good condition with a very small annual expense. It is estimated that on a good gravel road properly made one horse will easily haul as much as four would upon an earth road or one improperly made, while on the well-made stone road he can again double his capacity, or draw four times as much as over the poor road.

The preliminary steps are the same in all cases, first to secure a good, smooth and solid foundation of even grade, and well drained. The last is of great importance, as if water is allowed to soak through it below, or from above, and is not carried away, the best foundation will soon give way. The drainage would improve many even of our common earth roads, which being made soft by water underneath become almost impassable, and at certain seasons of the year, or are badly washed by heavy rains at others, when there are no drains or gutters to carry away the surface water. When finished the road needs to be made hard and smooth by the use of a heavy roller. This is done at several different times during the construction of the stone roads.

But we wonder that more notice has not been taken of the system of steel track roads as devised by the Hon. Martin Dodge, the State highway commissioner of Ohio, first advocated by him in 1891, and of which he built a section near Cleveland, O., in 1893, also small sections at the Exposition grounds at Omaha, and other sections have been built by the road expert of the office of Road Inquiry at the agricultural experiment stations at St. Anthony's Park, Minn., and at Ames, Ia.

We take his description of them from the Year Book of the Department of Agriculture for 1898.  
"The road thus laid consists of two parallel lines of steel plates, eight inches wide, laid at a sufficient distance apart to receive the wheels of vehicles of standard gauge. These plates have a slightly projecting flange upward on the inner edge, to prevent the wheels of ordinary vehicles which have no flanges from easily leaving the track. At the same time these flanges, being only one-half inch high, are not of a height to prevent the vehicles from leaving the track for the purpose of passing other vehicles when so desired. These plates are not supported by wooden cross ties or by longitudinal stringers of any kind, but are provided with flanges projecting both downward and outward. These flanges are embedded in the concrete of the road bed so as to form a substantial part of it, and the steel plates are supported by a substructure of cement or other enduring material."

The claims made for it are that it can be built without greater cost in most cases, and probably less cost in many cases, than any other hard and durable road. That it will last many times as long as any other known material for road purposes, and with much less repair, and that the power required to move a vehicle over the steel track is only a small fraction of that required to move the same over any other kind of road.  
This last point was shown by a load of even-toned which required twenty horses to draw it over a common road. A load of the same weight was easily drawn by one horse with light harness over the steel track, though twenty-two times the weight of the horse, and if it had been fifty times the weight of the horse, or twenty-five tons, he could still have started and moved it without difficulty.

In wet and clayey soils there should be a substructure of broken stone a foot deep under the rails, and macadam between them and a foot each side of them, and the joints should be connected by cross-ties. The car in which the plates lie should be filled with cement to give a continuous bearing at every point. For a grade of three feet in one hundred, special rails would be needed, corrugated or ribbed transversely.

The experimental sections which have been laid have cost about \$1 a foot, but when rolling mills are equipped for making

suitable plates of say one-fifth of an inch thick, and weighing thirty pounds to the yard, the steel would cost about \$1000 a mile, and perhaps it might cost as much more to prepare the road bed and lay the track, including bringing the surface of the road bed even with the surface of the rails.

Mr. Dodge thinks the adoption of this method would lead to the use of vehicles much lighter in proportion to the load carried than those now in use, thus reducing the power needed, and the lowering of the wheels, now made high to overcome the inequalities of the road.

The development of the bicycle since they were made with low wheels, so that each now carries several times its own weight, is instance as to what can possibly be done. Now vehicles for the purpose of strength are made about as heavy as the load they are to carry, and some of the older ones often exceed that, and the power required to move them was thus doubled.

For distances over five miles some other power could be substituted for the horse, increasing the speed and lessening the cost of the power, saving much time and expense in travel and transportation.

### Dairy Notes.

A correspondent of the Ohio Farmer writes that a few years ago he drew to his barn a sack of hay not really mouldy, but a little musty in smell. He thought it was not bad enough to hurt it for feeding purposes, but in a few days after he began to use it he found his butter was off flavor, and it continued so until he began on good, sweet hay again, when it came all right about as quickly as it went all wrong. He was lucky, for sometimes it is not as easy to feed the taints out of milk and butter as it is to feed them in. Avoid both musty and mouldy fodder or grain of all kinds, especially for cows in milk.

It has been said that the adult, if in vigor at the beginning, can endure almost to the point of starvation and recover when again given sufficient food to restore the wastes of the system, which would seem to have been partially proven by the number of those who have fasted for thirty days or more, but the infant and the growing child seldom do so. It is just so with the calf. A partial starvation when small, or at almost any period up to maturity, will give it a setback in its development that cannot be overcome by future good treatment. But starvation may result from having enough that cannot be properly digested, or that does not contain the proper material for growth in proper proportions. Even when it suckles its dam it may suffer from finding too much fat and too little protein in its food. More frequently it suffers because when the weaning process begins it has not learned to substitute grass, hay or other food for the milk to which it has been accustomed, and it takes days if not weeks of starvation to bring it to try the unaccustomed food, during which time it loses weight and strength, while the hand-fed calf, even upon skim milk, can be kept up to a steady growth each day, even if not putting on as much flesh in the first two months.

We have taken an old cow that in the hands of a poor feeder had been reduced almost to "skin and bone," and in a few weeks of good food gradually increased in amount, have been able to bring her to good condition, and to her normal milk production when she came fresh, or fattened one that was farrow, but a calf that had been allowed to get lean and lank, or a heifer poorly fed while growing we never could bring up to what we thought were her natural capabilities. Therefore, we say, manage that each week shall show indications of some improvement in size and condition, and do this with food that has plenty of protein, to build up bone and muscle, store up energy and vitality, and keep appetite good, without putting on fat, if the animal is intended for the dairy.

We would prefer to take a Shorthorn or a Hereford heifer, and by feeding make a dairy cow of her, than to take a Jersey that has been fed as some people feed, and as one should be fed when baby beef is wanted. The hereditary influence, strong as it may be, yields to the effect of improper feeding and improper care, or a lack of care.

The high or rich flavor so much commended by the experts who award the prizes on butter at some of the dairy exhibitions we suspect to be in a large part due to an excess of casein in the butter. By what process it can have been retained there without leaving too much buttermilk we will not pretend to explain. We know that newly churned butter, which has not been thoroughly washed and worked, has to us a finer flavor when new than that which was well washed while in the granular form, or as the directions say, when the butter is in granules about as large as a grain of wheat. But this casein, or the buttermilk that holds it, causes a rapid change in flavor to one that is not as pleasant, and this may help to explain why some high-testing samples are found to go off in flavor so rapidly. We are not sure but some methods of feeding may develop more casein as well as to make butter harder, softer, or more oily in appearance. Years ago this would not have been thought possible, but now these are well-known facts.

In commenting on the tests of the various dairy breeds at the Pan-American Exhibition, a few weeks ago, we said that we thought those who had the best Jersey cows had not sent them forward for trial, as the record made there was far below many published records. A writer in Hoard's Dairyman says there are fifty Jersey cows in the near vicinity of Buffalo that could surpass the records of those at Buffalo, and we think there are many others in the country, and we could find a herd of Holsteins and Holstein grades that would exceed the records that breed has made, for amount of

milk or percentage of butter fat. Many who have real good animals with well-authenticated records do not care to subject them to a treatment by those who are strangers to them in a strange place, or to be at the expense of sending a caretaker with them, and the nervous Jersey and Ayrshire will not do their best under conditions strange to them, nor do we think the Holsteins will. The percentage of butter fat shrinks rapidly if the animal gets a little excited by her surroundings, and the best cows, being the most nervous, or, as we say of a horse, the most high strung, the more readily they are excited. The best cow we ever owned we lost, or had to fatten for beef, by reason of exhibiting her at a county fair. We had refused \$100 for her more than once, though she was not pure-bred, but after the fair she aborted and we had to let her go just

to get the right size. When put on it is well to smear the splint and string with pine tar, not only to prevent the strings from getting loose, but to keep away the flies, which might be so annoying as to cause attempts to use the limb before it was united.

But a much better way is to guard against there being any broken legs. Do not leave any places into which they can put a foot so that it will catch, do not force them to jump, and do not head them and turn them suddenly. The leaders in such a case may stop so quickly as to be overrun by those behind them, by which more than one broken or lame leg may be caused.

Professor Shaw of the Minnesota School of Agriculture gives several reasons why a little flock of sheep should be kept on every farm, with which we agree so very thoroughly that we will repeat them in a condensed form. They ought to be kept to tidy up the farm. They will clean up the weeds and grass along the lanes, fence corners and the sides of highways. They will take the weeds in the stubble and those left in the pastures by other stock, and they like such food and thrive on it, as they like a variety.

One sheep will consume about as many weeds in a summer as the average farm boy could be persuaded to destroy. This summer feed costs practically nothing and is really a benefit to the farm. The expense of the winter feeding is not great. They use but a few pounds, say three or four, of dry matter in a day, and they pay well for that with lambs and wool. The well-fatted sheep or lamb will furnish the best of meat for the warm months to the farmer's family. There is seldom trouble from disease among them when running in small flocks with other animals.

To this he might have added the fact that no animal returns as much fertility to the farm for the value of the food given as the sheep, whether in the shed during the winter, or running out in good weather, when they distribute their rich fertilizer more evenly and in condition to be available for plant food than do other animals. And no animals require so little time and labor for the value of their products. To be fed and watered in winter, to be looked after at the lambing season, to have a little care in feeding the lambs during the period of growth, and to shear them once a year. No grooming every day, no milking twice a day, no danger of much worse than a little bumping by the ram, if he gets vicious, which is not as bad as being gored by the bull or the old boar, kicked by the horse or bitten by the dog.

But the sheep likes best a high and dry pasture, and they thrive best there. In fact, they prefer rather scanty and what we would think poor feed to the rank feed of moist meadows or swamps. In such they may contract foot rot, and while in rich feed they may grow heavier and have heavier fleeces, the wool gets coarser, as has been proven by sheep taken from the hills of Vermont to the more luxuriant pastures of the West or to Texas and Australia.

This preference of the sheep for high and dry land, and of lying down to rest upon the highest point, that they may feel the wind as it blows in summer, has one advantage. Their droppings are scattered upon what is usually the poorest or thinnest soil, and while some may be washed down the sides of the slope, it is put where it is needed even in

that case, to compensate for the yearly wash from high to low lands.

We have said that the stock growers, dairymen and fruit growers of the United States must keep wide awake if they do not want to be outdone by their Canadian neighbors, whom we were accustomed not long ago to think were far behind us in agricultural education and enterprise, and badly handicapped by their cold climate. We might have asked then, can any good thing come out of Canada?

The Toronto Mail tells of some good things that are going into it, from which we may expect good things to result, as follows:

"Some very large and important purchases of pure-bred stock have recently been made by Ontario farmers in England. Mr. Carpenter, M. P. P. of Simcoe has become the owner of one of the best rams and one of the best ram lambs shown at the Royal Agricultural Exhibition at Cardiff. He also secured twenty ewes from among two of the finest flocks of sheep in Britain. The value of this stock aggregates \$1500. Mr. Joseph Brethour bought the choice of the first prize pen of large Yorkshire boars at the Royal Show, as well as two first-prize sows, two boars, and six other sows chosen from the herds of Fido L. Mills, J. Daybell and Saunders Spencer. This stock, together with 250 Shropshire, Hampshire, Dorset and Merino sheep, the property of Mr. Robert Miller of Stouffville, are now in quarantine at Levis. Mr. W. D. Flatt, Hamilton, and Mr. Robert Miller, Stouffville, have bought over one hundred head of Short-horns, being some of the most celebrated animals in Britain. These animals are now on a Donaldson liner, bound for Montreal. Mr. J. Davis has selected in Britain about sixty head of Yorkshire swine. There may have been other years when the imports of fine bred stock were more numerous, but none when the quality was so uniformly high. In many cases the stock is the cream of British herds, bought regardless of price."

### Bees and Honey.

At this season of the year the bees are apt to get very irritable, as the honey flow is light and they are producing no more than they need for daily subsistence, unless some special provision has been made for them, such as sowing buckwheat, sweet clover or other nectar-producing plants. But they need little care, as they probably can feed themselves well, and they will need no more than they can procure until the latter part of September or in October, and they will do for themselves very well even then, if there is abundance of goldenrod to work on. But begin to feed early enough to keep the queen laying, and get out brood enough in October to have a strong colony, with plenty of stores to begin the winter with. While we have said that a colony should have 30 pounds of honey in the hive at the beginning of winter, we think it would be safer to leave a large colony more, even up to 40 pounds.

As there will not be much more honey to store in the supers this fall, it will be well to remove them and save up all the unfinished sections to use for bee feeding next spring. Then inspect the hives, and if there were any late swarms or any that seem to be but small colonies, begin to try to build them up for winter. The easiest and often the best way to do this will be to unite two colonies in one, though many would prefer to add a frame of brood comb from a strong colony to the weak one, putting an empty frame in the center of the old colony, and even feed them a little if they need it, to make up the full number of colonies.

Green's Fruit Grower tells of a swarm of bees appearing in the rear end of a wagon box on the main street in Rochester, N. Y. Some one who did not appear to be afraid of bees unfurnished the horse, and drew the buggy into a side street, and finally succeeded in living them in a soap box. But the most remarkable part of the story is that the bees were said to have come from the town of Sudas, about twenty-five miles away, having followed an electric car all the way until it stopped at one of the principal corners of the city, when they left it to go to the wagon box. We think there must be some error there. If they had said from five miles away we should have thought it to be a remarkable flight, but not incredible, and even then we should have suspected the queen of stealing a ride a part of the way.

The law in regard to bees is thus laid down by a writer in the Farmer's Tribune, we know not how correctly, but his statements seem reasonable and to be founded on fact. A swarm of bees leaving a hive and not lost sight of may be claimed by the owner, but he has no right to commit damages to the property of another to get them or to cut a tree or even a branch to live them. A swarm of bees upon a tree, or even seen flying through the air, may be claimed by the finder if the original owner is not known or does not follow them up, but they must be kept in sight by the claimant. A swarm of bees wild in a tree belongs to the finder, if he marks his name on the tree, or puts a private mark on it, but he must make claim with the owner of the tree, before it can be cut or in any way damaged to secure the bees or the honey, yet the owner of the tree is not supposed to own either bees or honey if they have been previously found and claimed by another party. Thus some friendly agreement is best policy for both parties, lest they get the stings and the lawyers have the honey.

A writer in Gleanings claims that cane sugar is much better for feeding to bees than beet sugar, as it is sweeter and contains more glucose, and that bee keepers in Europe avoid the highly refined sugar because it is usually beet sugar. He advocates a Barbadoes or Muscavado sugar as having six per cent. of glucose and three

per cent. of organic matter, while refined sugar has but one-half of one per cent. of glucose and one-fifth of one per cent. organic matter.

This is the reverse of what we have always believed, and have thought that the presence of glucose in considerable quantity was injurious to the quality of the honey and the health of the bees. The veteran editor of Gleanings says he has used refined sugar for bee feeding for fifteen or twenty years, and thinks that lately, at least, nine-tenths of the refined sugar bought for that purpose by the average beekeepers has been beet sugar. If he has found it good for that time, we shall continue to advocate the refined sugar.

### Helping Out the Summer Pastures.

The success of summer dairying depends upon the pasture first, and then on the way the pasture is helped out in the way of providing additional summer food. We have passed the age of dairying where a progressive farmer depends entirely upon a pasture field, turning his cows loose there all summer, and letting them scurry for a living. Such cows live in clover the first half of the summer, and nearly starve during the rest of the season. They grow lean and weak, and their milk supply gets smaller and thinner every week, and by the time fall and winter comes they are pretty specimens. A farmer once told the writer that he had tried summer dairying and winter dairying, and there was money in neither. Upon investigation it was found that his system was to starve the cows in summer for winter dairying, and vice versa for summer dairying. The result was the animals never came up to the mark because it took them half the season to recover from the starvation process.

Whether you intend to try winter dairying or depend simply upon summer dairying, it is necessary to have good pasture through the summer, and in the late summer and autumn it is necessary to help the pasture out. This is simpler than many imagine. Sometimes it simply means fencing off a portion of the field, so the grass has a chance to grow while the cows are feeding on the other part. Constant daily cropping in hot, dry weather kills the grass and keeps the plants from ever getting any headway. If the pasture field is sufficiently large, fence part of it off in August, and in this way keep it green and healthful. Also be sure that the weeds and briars are kept cut down. Do not let any of these go to seed. Their spread will ruin a pasture lot quicker than anything. The cows do not disturb the weeds and briars, and consequently they have the opportunity to grow and thrive while the grass has not. At least give the latter a fair chance in the race.

Help the pasture out with ensilage and corn stover crops. Do not be sparing with these even in summer. They may save a good deal for the late fall pasture, which is oftentimes more valuable to the dairyman than the early spring and summer grass. A little system like this will go a long way toward keeping up the quality and supply of milk and cream, and at the same time preserving the health of the animals for the fall and winter work.—William Conway, Indiana.

### Profitable Orchard.

One of the drawbacks to apple raising is that it takes several years before the young seedlings begin to produce crops sufficiently to make any material returns. The problem is for beginners how best to secure returns from the land while the apple trees are growing. One of the best ways to do this is to plant peach trees with the apple, setting them in rows between the apple trees. Full-grown apple trees need a good deal of room, but it will be a great many years before they reach the size which will make them occupy all the space. The peach trees set between the apple trees will produce crops and pass the period of their greatest usefulness before the apple trees have reached full maturity. One of the best orchardists in this State makes this his invariable practice. His peach and apple orchards are constantly undergoing change and evolutions as a result. He not only always has a good crop of peaches and apples, but he has new ones in prospect which will soon be ready to take the place of the old ones. It is his practice to plant each year a combination orchard of a few acres with peaches and apples. A few acres every year soon rolls up a big orchard, and with the steady increase in the output he enlarges the facilities for handling the crop. The peaches, invariably, pay well, and the apples too. It may be remarked that his ambition is to produce quality and not quantity. It is quality that produces profit, and not quantity. Consequently he is one of the most drastic pruners of the State. His fruit is always fine, because he permits no tree to produce more than a certain amount, which is well within the limits of safety. Thus the strength of the trees goes to make fine fruit instead of great quantities. As an illustration of the difference between the pruned and unpruned trees, he figures that the latter would average on peach trees about 1500 to two thousand fruits, while he prunes down so that no tree bears more than two or three hundred peaches. Such drastic pruning would not be acceptable to many. They would claim that more returns would be received for the two thousand peaches than for the two or three hundred; but when the difference in the cost of picking, packing and shipping these two quantities of fruit is considered the profits will be found every time on the side of the smaller shipments. One should satisfy himself of this by making a systematic record of the costs and returns of the fruits from two trees, one being pruned heavily and the other left unpruned. It is an easy matter to find out which pays.—S. W. Chambers, New York.



CLIMATE.



## Agricultural.

## Selection and Improvement of the Dairy Herd.

The July crop report of the Massachusetts Board of Agriculture contains a bulletin from Prof. F. S. Cooley, who is professor of animal husbandry and dairy at the Agricultural College at Amherst. He thinks the cows of Massachusetts are not producing as much as good husbandry calls for.

He quotes the figures of Maj. Henry E. Alvord of the Dairy Division of the Department of Agriculture, that the average cow gives about three thousand pounds of milk a year, yielding 125 to 130 pounds of butter, and says that Dr. J. B. Lindsay, in canvassing representative creamery districts, estimated 150 pounds of butter to a cow in this State, which was very near Maj. Alvord's figures for the State. In his own canvass of all the creameries in 1899, he found the average yield 175 pounds of butter per cow. This would indicate a milk flow of about 1700 quarts, worth \$42.50 at 25 cents a quart, or 175 pounds of butter at twenty-two cents, worth \$38.50, and 1500 quarts of skim milk at one-half cent a quart, or \$7.50, making the total value of \$88.50. It is doubtful if \$43.50 will pay the keeping of the cow for a year at average prices.

There are cows that yield eight thousand to twelve thousand pounds of milk or four hundred pounds of butter a year, which would pay \$100 to \$150 a year for food consumed.

He compares three herds of twenty cows each, low, medium and high quality as milk producers. The poor ones might be bought at \$40 each, or \$800. It would cost \$40 each per year to feed them, or \$3200 for four years, and interest, taxes and insurance for that time at 8 per cent, would be \$296, a total of \$4296. They would produce 136,000 quarts of milk, at 25 cents \$3400, and they might sell for beef at the end of four years at \$30 each, or \$800, leaving a loss of \$296 to balance the account.

A better quality might cost \$52.50 each or \$1050. They would want better feed at a cost of \$50 a year, or \$400 in four years, and the interest, taxes and insurance at 8 per cent, on first cost would be \$214, a total of \$5364. Such cows should yield in four years two hundred thousand quarts of milk, worth \$5000, and should be worth as beef at the end of that time as much as the others, or \$800. This leaves a profit to balance amounting to \$214.

The third herd might cost \$75 each or \$1500, and each use \$65 worth of feed in a year, or \$520 in four years, while interest, taxes and insurance on cost would be \$480. They should produce in four years 320,000 quarts of milk, or about 4000 quarts each, not far from \$5000 pounds a year. This would be worth \$8000 in four years, and if then sold at \$30 each for beef, there would be a profit of \$1420.

These figures are a little empirical, but no allowance is made for value of the calves dropped, which should be greatest from the best cows. His own herd, bought at an average cost of \$43.50 head, as he has found to find such suited him, cost about \$65 a head to feed each year, and produced an annual yield averaging 1756 pounds of milk, but it was exceptionally rich in butter fat, and if sold on that basis would be worth more than 25 cents a quart. He says he knows large herds that average 6000 to 8000 quarts of milk a year, or producing 300 to 400 pounds of butter, and thinks no dairyman should be satisfied with less than 400 pounds, or keep a cow that will not produce 300 pounds.

He gives some of the points by which he would select a good cow, the capacious udder being the first to be considered. It may be large and meaty, but not capacious. It may be unsymmetrical in shape, and yet produce large quantities of milk. It should be long and broad in its attachment to the body, becoming more let down as she gets older. If it extends well behind and well forward, with good width, it has capacity. The placing of the teats is less important, but their size and shape may mean convenience or inconvenience in milking, and a slow or hard-milking cow loses \$10 or \$15 in her value, because of the extra labor to get the milk.

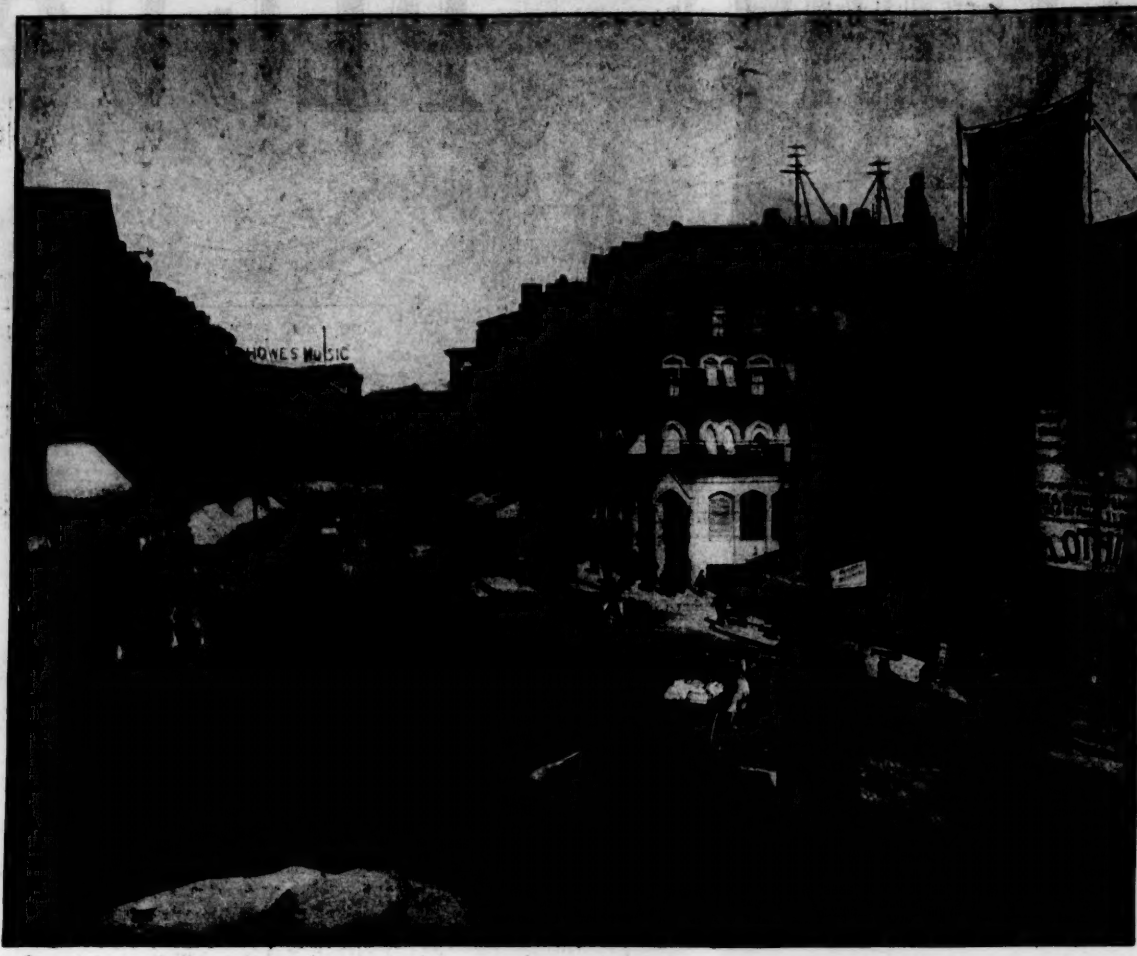
He wants a cow with body long and deep to give capacity for carrying abundant food. More stress should be laid on this in selecting a cow for breeding or the dairy. The hind quarters should be well developed, with wide, rather prominent hips and a roomy pelvis, with the rump long and level, good depth of quarters and moderate straightness of back and ribs. The difference between the milk cow and the beef cow is that the udder of the former fills the place where the meat should be on the other. Some good cows have long sloping hips, but it mars their beauty, and adds nothing to the dairy capacity.

A light fore end may be overcome, but the head and neck should be quite longer than in the beef cow, not as thick or well filled, the shoulders not so wide, the withers and joints of backbone more prominent, and the ribs not so well sprung, but while lighter and more delicate looking than the beef cow, she should have good girth around the heart to give lung room, and not crowd the vital organs.

The milk veins large, extending well forward, with numerous branches, and winding in form, with large or numerous milk wells by which these veins enter the abdominal cavity, are indications of a good milker; so are also a mellow skin, not too thick and fine, close-lying hair. Long, mossy hair is the mark of beef stock. The esutcheon is of minor importance if not accompanied by other marks of excellence. The yellow tinge of the skin indicates quality of milk rather than quantity. The dairy type is nervous rather than lymphatic. The best way to secure good cows is to breed them, as there is always uncertainty about a purchased animal. Change of the conditions of food or management may result in shrinkage of milk. They may prove to have bad habits of kicking, fence-breaking or self-sucking. They may introduce disease, as abortion or tuberculosis. Some cows may do very well one year and poorly another year, perhaps by reason of milk fever, retained afterbirth, garget or accident.

The dairyman should select the breed that meets his requirements, whether for milk, butter or beef, as each has its strong points and its particular place. Then do not change breeds without good reason. Do not try to increase butter fat in a Holstein herd by crossing with the Jersey, but try to find a Holstein from a strain that gives rich milk, or try to increase the quantity from the Jersey by crossing with any other breed.

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VIEWS OF OLD BOSTON, No. 13.

View of Scollay Square, from Corner of Court and Tremont Streets, About 1884.

but find a strain of good milk producers. These outcrosses with other breeds soon degenerate the herd to mongrels.

The old saying, "the bull is half the herd," is only true when he has the power to transmit the qualities of his ancestry. The practice of using young bulls and then killing them before it is seen what they produce is but little better than using a scrub bull. A well-bred and promising young bull can often be bought for \$50 to \$100, and if heifers are to be raised many prove worth \$500 in a few years service, by improvement in quality of the future herd. While a good pedigree has its value, look also for individual merit in the animal. When such a one is found retain him as long as possible.

Attention should be paid to the selection of heifer calves. Those of very small size, weak or seriously defective, have no place in the young herd. It is doubtful if it will pay to use whole milk for common stock to raise calves, but a good calf is worthy of a little whole milk in the ration for the first month, as a setback at that time is hard to overcome by after feeding.

Professor Cooley's method is to separate the calf from its dam after the first full meal. It is taught to drink and fed on its mother's milk twice a day for the first week. During the second week warm milk from the separator is gradually substituted until it is almost the entire feed, but about a quart of new milk is given daily, until the end of the first month. Two feeds a day are given, always warm and never excessive in amount, but three would be better. The calves are taught to eat dry grain after two weeks old, and given all they will eat of a mixture of corn meal, oil meal, ground oats and bran in about equal parts. Hay, silage or grass is given to the extent of their appetite.

The horns are removed by caustic potash during the first two weeks, when it causes no disfigurement or trouble. The feed of skimmed milk is kept up until they are a year old, if supply does not run short. They are harder and more rugged if they have daily exercise in yard or pasture, though they do not make as rapid growth. Keep the growth up by liberal feeding until they are sent to pasture. The second winter give a small feed of the grain mixture given to the milking herd, gluten feed, cotton-seed meal, corn meal and bran. Keep growth active, as size adds to the value of the dairy cow.

He would not breed the heifer until eighteen months old. Some of the best cows he ever saw were not bred until two years old, and some beef breeders will not allow a calf to be registered unless its dam is twenty-seven months old when the calf was born. This may be right for the beef breeds, but would breed Jerseys and Ayrshires three months younger if well grown and well cared for, if necessary to bring the calf at the season we wanted it.—E.P.

The heifer with first calf may well be allowed a period of fifteen to eighteen months before she comes fresh again, that she may nearly complete her growth, and increase her capacity for milk. While she is doing this, she should be liberally fed, as she must make growth, produce milk and sustain the calf she is bearing. To withhold concentrated food at this time lessens milk flow and hinders her from reaching her most useful development. It may not be desirable to crowd her with heavy feed, but furnish the material to make good the drain by the milk as would be done with the mature cows.

## Butter Market.

The dull trade and lower prices in the West have had their effect on this market, and though some dealers do not like to acknowledge it, we think prices are at least a half-cent a pound below those of last week. Some are holding on for 21 cents, yet for best lots Northern are selling at 21 cents, and thinking they may have to come to 20 1/2 cents, which is the highest asked for Western assorted spruce tubs, while ash tubs are not in demand at above 20 cents. Best marks Eastern are 19 to 20 cents, and fair to good 17 to 18 cents. Western firsts are 16 to 17 cents and seconds at 14 to 15 cents. Boxes in moderate demand at 21 cents for extra Northern creamery and 21 cents for Western extra. Prints a half-cent higher on these grades, and in fair demand. Extra dairy in either does not go above 19 to 20 cents, and fair to good 14 to 17 cents. Dairy tubs, extra Vermont 18 cents and New York at 18 cents. Firsts are 16 to 17 cents, seconds at 14 to 15 cents and low grades 12 to 13 cents. Choice renovated in fair demand at 16 to 17 cents, and lower grades dull at 12 to 13 cents. Imitation creamery quiet at 13 to 15 cents and ladies at 13 to 14 cents. Jobbers are trying to get 22 cents for extra creamery, and 22 cents for special marks, which is not more than it cost them, but they must come down, sell out and buy lower the next time.

The receipts of butter at Boston for the week were 23,732 tubs and 20,614 boxes, a total weight of 1,144,204 pounds, including 32,500 pounds in transit for export, and ex-

cluding the latter, the net total is 1,111,704 pounds, against 1,063,615 pounds the previous week, and 1,071,839 pounds for corresponding week last year.

The exports of butter from Boston for the week aggregated 22,500 pounds, against 77,136 pounds last year. From New York the exports were 2677 tubs, and from Montreal 16,843 packages.

The Quincy Market Cold Storage Company reports for the week as follows: Taken in, 5716 tubs; out, 3948 tubs; stock, 189,193 tubs, against 174,633 tubs same time last year. The Eastern Company reports a stock of 29,292 tubs, against 24,800 tubs last year, and with both stocks added the total is 218,485 tubs, against 199,433 tubs same time last year, a difference in favor of this year of 19,052 tubs. A year ago the ins and outs nearly balanced each other. Last week about 2000 more packages were taken in than put out.

## Vegetables in Boston Market.

There seems to be plenty of vegetables coming in now, and a good demand. To look at the 130 or more wagons loaded with produce and fruit on the streets at six o'clock in the morning one would imagine they could not all sell out, but most of them do before noon, and a new lot are on hand to take their places in the afternoon. Prices are a little easier, beets selling at 40 to 50 cents and carrots at 30 cents a box. Flat flat turnips 40 cents a bushel, and yellow 12 to 15 cents a barrel. Native onions in good supply at 60 to 85 cents a box, or \$2 to \$2.25 a barrel for western Massachusetts. Leek at 30 cents a dozen, and chives nearly done at \$1 to \$1.25. Radishes 50 cents a box. Cucumbers from \$1 a hundred for good up to \$2 for some fancy large. Peppers \$1.25 a box. Celery in fair supply at \$1 to \$1.25 a dozen, and satisfy the same. Egg plants \$2 a box of 15 dozen. Tomatoes in good supply at 40 to 75 cents a box, the latter price only for extra fancy. Marrow squash \$1 a barrel, and summer white at \$2 per hundred.

Cabbages not very plenty. Large are 85 per hundred, but some small ones offering at \$3 to \$4. Cauliflowers from 75 cents to \$1.50 a dozen as to size and condition. Lettuce 30 to 50 cents a box, spinach 25 cents, parsley 15 to 20 cents and endive 75 cents to \$1. Green peas scarce at \$1.50 to \$2.50 a bushel. Green corn 35 to 50 cents a box. String beans at 40 cents for wax and 50 cents for green. Shell beans abundant at 45 cents a bushel, Lima 85 and Sieva at \$1.75.

Potatoes in liberal receipt. Barrel stock is cleaning up slowly at \$2 to \$2.25, and some fancy at \$2.25 to \$2.50. Aroostook Hebrons at the cars are 70 to 75 cents a bushel. Pride of South 70 cents and Red Bliss 65 cents. Sweet potatoes in full supply, Norfolk yellow \$2.75 to \$3 a barrel, Eastern Shore \$2.50 to \$3 and North Carolina \$2 to \$2.75, many of them being small. Red or white dull at \$2.

## The Hay Trade.

The receipts of hay have been more liberal the past week, including the considerable amount of new hay that has been received, but in most markets the old hay is preferred, and buyers will pay a higher price for it in limited quantities, waiting for the new hay to get dryer before they begin to buy it.

Boston has not much new hay yet, but there are lots moving this way that may make the chief supply before this week ends, as the stock of old hay is well cleaned up, and includes but little better than No. 1 or even as good as that. Receipts were 119 cars of hay, of which 29 were billed for export and 26 cars of straw. A year ago 84 cars, of which 26 were for export and 58 cars of straw. Prices for choice timothy, large bales \$18 and small bales \$17 to \$17.50. No. 1, large \$17 and small \$16 to \$17. No. 2, \$15 to \$16, No. 3, \$14 to \$15. Clover mixed \$13 to \$14 and clover \$13. Long rye straw, fair, \$15 to \$16, tangled rye \$1 and out straw \$8. Providence has even a lighter supply in stock than Boston, and receipts have been extremely light so that prices on all grades are at least 1 per cent higher than in Boston.

New York has a larger supply, having received 6103 tons, against 7445 tons same week last year, and exported 9793 bales against 65,202 bales last week. There were some arrivals of old hay, but new hay meets with a degree of favor and sells nearly at a par with old hay unless latter is strictly choice. There were 485 tons of straw, but there is much complaint about it being stained or off color in some way. Brooklyn and Jersey City are having more liberal receipts, but prices on choice and No. 1 old continue firm, though the demand is not for large lots. Tangled and low grade rye straw hard to sell.

The Hay Trade Bulletin gives highest prices at various markets as \$20 in New York and Providence, \$19 in Brooklyn and Jersey City, \$18 in Boston, \$17 in Baltimore and Memphis, \$16.50 in Nashville, \$16 in Philadelphia, St. Louis and Norfolk, \$15 in Chicago, \$14.50 in Buffalo and Pittsburgh, \$14 in Cleveland, \$13.50 in Kan-

sas City, \$13 in Minneapolis and \$12 in Duluth.

The Montreal Trade Bulletin says the early reports of large crops in Province of Quebec were not exaggerated. In new baled hay contracts for a large barge load at \$8. One thousand tons of clover mixed, delivered at country points at \$6, and lot of clover at \$5.50 free on board. About sixty cars old No. 2 sold at \$9.50 to \$10, and more to be marketed.

## Domestic and Foreign Fruit.

Apples are coming freely, but not all in good condition, some lots scarcely bringing enough to pay the freight. Good Gravenstein bring \$2.50 to \$3, Williams \$2 to \$3, Duchess \$2 to \$2.50, Codlin and Nyack Pippin \$2 to \$2.25, Astrachan \$1 to \$2, and York State mixed lots in full supply at \$1.75 to \$2.25, but not many above \$2. Pears are plenty. York State Bartlett \$2.50 to \$4 a barrel, not many reaching top price. Clapp's Favorite \$2 to \$2.50. Farmers selling on the street at 60 to 80 cents, a bushel. Peaches in moderate supply and selling well. Elberta \$1.50 to \$2 a carrier, Maryland and Delaware baskets, extra, \$1 to \$1.15, fair to good \$1.75 to 90 cents and common 40 to 50 cents. Connecticut baskets No. 1 75 to 85 cents. No. 2 40 to 50 cents. Plums are dull; 8-pound baskets, large blue 25 cents, green 15 to 20 cents and Abundance the same. Grapes in light supply. Hudson River Delaware at \$1.75 to \$2.50 a carrier, Southern at \$1.25 to \$1.50, Niagara \$1 to \$1.25 and Champion 50 cents. Moore's Early 75 cents to \$1 10, Hudson river, 50 to 75 cents for Southern. Blueberries in light supply, choice firm at 11 cents, but more at 8 to 9 cents. Musk-melons in moderate supply. Some fancy Colorado Gems at \$4 a crate, Jersey Gems and Jenny Linds 75 cents to \$1, Baltimore 75 cents to \$1.25, Norfolk 25 cents to \$1 Maryland \$1 a carrier. Watermelons in large supply; extra large sell at \$15 to \$16 medium \$12 to \$14, and small \$8 to \$10 per hundred. California peaches \$1 to \$1.25 a box, plums at \$1 to \$1.50, and prunes at \$1.25 to \$1.75 a case.

No oranges excepting a few California late Valencia, 176 and 200 counts jobbing at \$4.50, 126 and 150 count at \$4 to \$4.25, 96 to 112 counts \$3.75 to \$4. California lemons vary in price and quality from \$1.50 to \$3 a box and grape fruit from \$3.50 to \$5. Messina and Palermo lemons, 300 counts, fancy \$4 to \$4.50, choice \$3.50 to \$3.75, fair to good \$3 to \$3.25, 300 counts 25 cents a box less on same grade. A few 420 and 500 counts at \$2.50 to \$2.75. Maiori and Sorrento lemons, good to choice \$4 to \$4.75 and some fancy at \$5 to \$5.25. Pineapples quite plenty yet, over 11,000 received last week. Abakus \$3 to \$4 a crate and Cayenne from 16 to 50 cents each, as to size. Figs and dates unchanged. Bananas, plenty of yellow at \$1.50 to \$2.50 a stem. Red are scarce at \$3 to \$4.50, as to size and condition.

## Boston Fish Market.

The condition of the fresh fish market has almost reversed from what it was a week ago. Shore and banks fish are plenty, with a light demand. Market cod are selling at 20 1/2 cents, large at 45, and steak at 65 cents a pound. Haddock 12 cents for small, 24 cents for large. Hake 2 cents for small, 24 for large. Pollock and cusk 24 cents, flounders 33 cents, tautog 4 cents, scup 5 cents, whitefish 6 cents and butterfish 8 cents. Mackerel are scarce and in demand at 15 cents each for large 10 cents for medium, and 7 cents for small, striped bass steady at 12 cents, black bass higher at 9 cents and sea bass 7 cents. The large swordfish caught last week, 635 and 672 pounds each, did not supply the market long, and they are in demand at 13 cents. Bluefish are 10 cents, pompano 11 cents, snappers and sheepshead 12 cents. Spanish mackerel 15 cents. Halibut in light supply, white at 13 to 15 cents, gray 12 cents and chicken 10 cents. Lake trout 10 cents and sea trout 5 cents. Sea perch 15 cents a dozen, and yellow perch 4 cents a pound with pickled 12 cents. No salmon now but frozen ones. Eastern at 15 cents and Western at 10 cents. Eels steady at 10 cents, fresh tongues 9 cents and cheeks 7 cents. Clams steady at 50 cents a gallon, \$3 to \$3.50 a barrel in shell. Shrimps 45 cents a gallon, soft-shelled crabs \$1 a dozen. Lobsters a little easier at 15 cents alive and 17 cents boiled. Oysters steady and prices unchanged.

## The New York Markets.

A good demand for fancy round potatoes, others dull. Long Island at \$2.50 to \$3.25. Jersey \$2 to \$3 a barrel for prime, and \$1.50 to \$2 for common. Sweet potatoes quiet. Jersey \$3 to \$3.50 a barrel. Virginia yellow \$2.50 to \$3 and red \$1.50 to \$2. Beets and carrots \$1 to \$1.25 per 100 bunches; celery 10 to 30 cents a dozen roots. Onions in light supply and higher. Orange County white \$2 to \$3 a bag, yellow \$2.50 to \$2.75 and red \$2.25 to \$2.75. Jersey and Long Island yellow or red \$2.50 to \$2.75 a barrel, white \$1.25 to \$1.75 a basket. Connecticut, all kinds, \$2.75 to \$3 a barrel, and Southern

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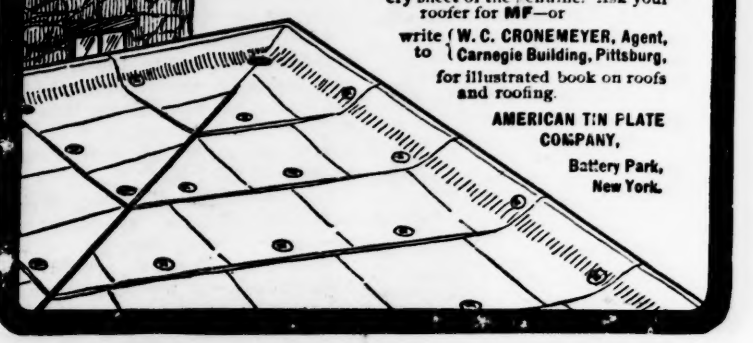
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\$1.12 to \$1.25 a basket. Russian turnips \$1 a bushel. Cucumbers, Rockland County large \$1 to \$1.50 a barrel, Jersey 50 to 75 cents, or 15 to 30 cents a box. Jersey peppers 30 to 75 cents a barrel, 20 to 25 cents a crate, and egg plants \$1 to \$1.50 a barrel, 50 to 65 cents a crate. Cucumber pickles 50 cents to \$2 per thousand. Cabbages scarce and firm at \$4 to \$5 per 100 for Flat Dutch. Lettuce irregular in quality. Boston \$1.25 to \$1.75 a case, an western New York \$1.50 to \$2. Green peas \$1 to \$2 a bag, and string beans 40 to 50 cents. Lima beans firm at \$1 to \$1.25 for potato and 50 to 75 cents for flat, per bag. Tomatoes more plenty, Hackensack \$1 a box, Jersey Acme 75 to 80 cents, Stone 60 to 75 cents, Grant 40 to 50 cents, Albany Acme, bushel baskets, 75 cents to \$1.25. Squash per barrel, marrow, \$1, white or yellow summer 75 cents to \$1.

Fancy apples are in demand, Alexander and Duchess at \$2.75 to \$3.75, Twenty Ounce \$3 to \$3.75, Gravenstein \$2.25 to \$3.25, Summer Pippin and Holland Pippin \$2 to \$3, green varieties, open-head barrels \$2 to \$2.50 and windfalls 75 cents to \$1.50. The low grades sell but slowly. Pears mostly of poor quality, and good lots would go above quotations. Southern Keifer 50 cents to \$1.50 per barrel, Clapp's Favorite \$2 to \$3, Bell \$1.75 to \$2, nearly common \$1 to \$1.50, Bartlett \$2 to \$3, or \$1 to \$1.50 a keg. Peaches in only moderate supply. Southern per carrier \$1.75 to \$1.85. Maryland and Delaware \$1 to \$1.75 a carrier, 40 cents to \$1 a basket. Jersey 30 to 75 cents a basket. Plums in light supply. Large blue, eight-pound baskets 30 to 35 cents, green 20 to 25 cents. Abundance 12 to 15 cents. Grapes are more plenty and easier. Southern Delaware 75 cents to \$1.25 a carrier, and Moore's Early 50 to 75 cents, Upriver Delaware \$1.25 to \$1.50, Niagara \$1, Worden 90 cents to \$1, Moore's Early 75 to 90 cents and Champion 50 to 60 cents.

Muskmelons irregular in quality and wide range in prices. New Mexico and Colorado fancy \$2 to \$2.25 a crate. Western over ripe 50 cents to \$1.50. Baltimore 50 cents to \$1. Western Maryland Gem 50 cents to \$1.50, others 40 cents to \$1. Jersey 50 cents to \$1 a barrel, 25 to 60 cents for half-barrel boxes. Watermelons dull. Some Maryland, Delaware and South Jersey at \$10 to \$20 per hundred, Virginia and Southern \$4 to \$10.

## Steamship Sailings.

Thirty-six steamers are scheduled to sail from Boston to foreign ports from Sept. 6 to Oct. 4. Liverpool steamers are: Dominion Line 4, Cunard 4, Warren 2, Leyland 4, total 14. London steamers are: Wilson Line 5, Leyland 1, total 6. Glasgow steamers: Allan 2, Bristol steamers: Elder-Dempster Line 1. Hull steamers: Wilson Line 2. Copenhagen, Christiana and Stettin steamers: Scandinavian-American Line 1. Rotterdam steamers: Holland-Boston Line 4. Hamburg steamers: Hamburg-American Line 2. One steamer sails daily for Yarmouth, N. S.; one for Portland, Calais, Eastport, Me., and St. John, N. B., three times a week; one for St. John, N. B., direct, twice a week; one for Halifax, N. S., twice a week; one for Jacksonville, Fla., Charleston, S. C., and Brunswick, Ga., twice a week; one for Bangor, Belfast, Rockland and Camden, Me., daily, except Sunday.

## Notes from Washington, D. C.

The eastern portion of the United States, it seems, is now exercised over the glowing accounts of corn production in the West, notwithstanding the loss from drought. A Western paper stated that prior to the heated spell a farmer in Kansas sent his fifteen-year-old son out to take a look over the corn field and notify him of the prospects. In order to do this the son went to the implement shed, which this wise farmer had provided, and procured a ladder with which he climbed one of the corn stalks. After surveying a fine growth of corn for miles around, the boy started to climb down, but in his excitement at the untold wealth his father would obtain after the harvesting of the corn, he had failed to notice the rapidity of the growth of the stalk which he had ascended. As quickly as he stepped down, so much more rapidly the stalk seemed to grow, and he was no nearer the bottom than when he started.

His father, noting the absence of his son, saw that it would be useless for him to hunt through the jungle of corn, so he climbed to the top of his windmill and his anxious eyes beheld his boy waving his red bandana in despair. Hastily summoning his neighbor and his other two sturdy sons, they proceeded with axes to cut down the wicked stalk. Their axes, however, failed to find the same mark twice, so rapidly did the stalk shoot upward. Night came on without their accomplishing anything, and the boy was left to

what appeared to be a fate of despair. Like most Kansas boys, however, he was awake to all his opportunities and existed for a long time on the raw corn, having consumed so much that he later notified his parents by means of a message written on one of the dried corn leaves that he was getting so fat there was danger of the stalk breaking with his weight. He wrote that he believed a more balanced ration would relieve his fears, suggesting the planting of beans at the base of the cornstalk as an expedient.

However, before the beans could secure enough growth, the drought came on and stopped the growth of the stalk, and the boy was enabled to climb down, thus saving his life. As mementos of the occasion, the lad gathered up the corn cobs which he had thrown down from his lofty seat, amounting to something over four bushels and a peck, and on these he is now working, turning them into corn-cob pipes which he will send to the truth bureau of the Pan-American Exposition.

An official of the Bureau of Animal Industry, when shown a press dispatch from Wisconsin stating that wholesale meat dealers are slaughtering and selling tuberculous beef, having withdrawn their watchfulness over this class of beef, owing to Dr. Koch's statement, stated that the department has no jurisdiction over cases of this kind, unless the beef is shipped out of the State. But, he said, the State itself has a law which no doubt will prohibit the sale of beef so infected. Congress has never fully appropriated enough money whereby the bureau can carry on its system of inspection of meat products thoroughly, so that the only protection the consumer has is to see that the inspection tag is on the beef purchased.

Dr. D. E. Salmon, the chief of the Bureau of Animal Industry, while probably one of the most enthusiastic vivisectionists in the United States, is not a believer in the use of mankind as subjects of experiments. "These reports and press dispatches which are coming to this department regarding certain people offering to give themselves up as objects for experiments," he stated, "indeed, disgust me, for one of the offences against society is suicide, and there is no doubt in my mind but that these men in placing themselves in the hands of scientists are just as guilty of attempt at suicide as a man who tries to jump off of the Washington Monument or the Brooklyn Bridge."

"Now, even if these experiments were carried out, and the subject lived after being inoculated with the tubercle germs (figuring that consumption is always fatal), would that show that bovine tuberculosis is not communicable to human beings? Or, on the other hand, suppose the man died after being inoculated, which I am positive he would do, would not the Koch adherents say that it was an accident, and that the patient had accidentally become inoculated with human tuberculosis? One experiment alone will not prove the truth of Dr. Koch's statement, but were the experiment made with every care known to the scientific world, and infection resulted, would not that show how liable we are to infection from bovines?"

All organisms have more or less effect upon different people, and perhaps one person might not show any sign of infection, and thus the experiment could not prove anything. But try this same method on a score of persons and I am positive that majority of them would show certain signs of tuberculosis.

"But as to experimenting upon human beings, this I am not willing to countenance. While I am a firm believer in vivisection, such action as this would give the vivisectionists much ground upon which to stand in their opposition to our work. "At the time the germ was in its infancy, a prominent Washington physician came and condemned the belief of the scientific world that germs were the cause of disease. I took him over to our laboratory and exhibited to him our tubes of cultures containing the germs of not only animal diseases, but those of the human family as well. He offered to pick any one of them up, whichever I chose, and swallow the entire contents, just to show that he could live through the experience unscathed. Of course I could not for a moment listen to any such talk, and he hastily took my visit out of harm's way. Had I allowed him to make the experiment, I have no doubt he would not have lived long, and a coroner's jury would have held me culpable for the man's death."

"So you see there were two sides to the question then as there is now, with relation to Dr. Koch's theory, but until we have other means of proving it, we must remain on the alert and not lessen our watchfulness. I certainly advise that every householder, in order to fortify himself, should see that each piece of beef purchased bears the inspection tag, not that untanned beef is harmful, but our inspectors, while unable to inspect all beef shipped from one State to another, owing to a lack of appropriation, will not allow tuberculous beef to pass. Tuberculous beef does not bear our tag."

GUY E. MITCHELL.



## Poultry.

## Practical Poultry Points.

A writer in an exchange says of poultry, "that stock has greatly improved in the last five years, but egg production has not." We do not know what part of the country he judges from, but we do not think that is the case here, and cannot believe it true of any section. Here in New England during that time there has been more effort made to improve the egg production per hen than to improve the breeds, though there are still many who do not try to do either.

But in our experience and as far as our observation has enabled us to judge, for fifty years the improvement in stock has been closely followed by an increase in egg production, partly because the better breeds have been naturally the most prolific of eggs, at least such as have ever attained much popularity, and perhaps because the interest awakened by getting better fowl has led to better houses, better judgment in feeding, and better care in every way.

When a man gets a flock of pure-bred fowl in which he takes pride, he does not leave them to roost in the trees, in an open shed or a henhouse which has the windows broken out. He does not let fith accumulate under their roosts for lice to breed in, and if lice are found he tries to destroy them. He studies the best methods of feeding, and does not let them run at large to be half starved one week, and then overfed from the grain fields or stacks at another time. This is the care that increases egg production, and results in better poultry for market.

The Maine Farmer tells of a poultry keeper in Robinson who began with Plymouth Rocks twenty-five years ago, and who now has two thousand hens and as many chickens growing in his orchard. It shows plainly the kinship that should exist between fruit growing and poultry.

It shows plainly the kinship that should exist between fruit growing and poultry. The eight feet apart through the orchard, and not a green thing is growing there but the trees, while the bark of the trees is smooth and glossy, and the leaves a rich deep green that can only be obtained under high cultivation. He is now getting about three hundred eggs a day, and as the hens stop laying he will market them to make room for the growing pullets, as he renews his stock each year. Eggs are gathered several times a day and shipped twice a week, bringing considerably above market quotations. We must trust the above report was written early in the season, or there is an error in it. To take the place of two thousand laying hens one should have about six thousand chickens, and then he might find it well to keep about five hundred of the hens another year to hatch out and bring up his chickens, as they sit much better and take better care of the chickens than pullets do with their first brood. Nor do we like oil barrels as coops. They may be better than four barrels, being broader, but we could not make a nest in a barrel that the eggs would not crowd toward the center and get broken, unless the barrel was at least one-fourth submerged in the ground and filled on the inside with earth a little above the surface of the earth outside, to make a nest nearly level that would not be wet by water standing outside. The oil barrels might have the advantage of keeping lice away.

At this season of the year the hens that are confined in yards should not suffer from a lack of green food, even if they are like the above described orchard, bare of every green thing. If there is a garden, there should be leaves from cabbages, beets, turnips and other plants to be found for them, and it might pay to grow lettuce expressly for them, as they seem to like that better than almost any other green food. We have never tried sowing rape, but from what we have learned of it, think it might be profitably grown for poultry, and it would require but a small bed for a flock of fifty or one hundred fowls, as when the tops are cut they begin to grow again at once, and in a few weeks are ready again. Round turnip, roots and tops, wild mustard and many other weeds are readily eaten by the hens, and the husks and leaves of sweet corn, if they are fed while green, but wilted green food may pack in the crop so that they will become crop bound, or if not they may cause indigestion and diarrhea, which is not as bad as the liver trouble that may result from too much grain without enough green food. This also sometimes is manifested by a diarrhea, which may have been preceded by an attack of constipation often not noticed. In all such cases, give a half teaspoonful of castor oil, or if not at hand the same of fresh lard which may at third dose be dusted with a little cayenne pepper.

An exchange, the name of which we unfortunately lost with the manuscript on which it was written, tells of a man on Long Island who last spring bought fifty guinea hens, intending to supply the market with eggs. Fine nests were made in the poultry house, but there was no evidence that a guinea hen visited them, and not an egg did he get, until one day the gardener cleared away a clump of bushes and vines around an old stump. From among the roots flew away a guinea hen that was sitting on a nest of eggs. It was literally a nestful, for there were two guinea eggs, one pea hen egg and two duck eggs, and the one little guinea hen was trying to hatch the lot. How she must have spread herself. If she had known Shakespeare she might have said something about that "vaulting ambition that doth o'erreach itself."

Dr. John Morris told the Medical Society of Maryland that while eggs in cold storage do not become over ripe or offensive in the regulation way, they are invaded by a peculiar fungus growth, which can only be detected by the microscope, though it may be recognized by the taste if one is used only to eating fresh eggs. It appears like specks of mould on the yolk and the membrane lining the shell, and in this condition the egg is unwholesome food, and sure to lead to serious ailments in persons of a delicate constitution or with weakened digestion.

## Poultry and Game.

There is a good demand now for fresh killed Northern and Eastern chickens, and choice roasting sell at 18 to 20 cents with broilers at 14 to 16 cents. Fowl are 12 cents for choice and 10 to 11 cents for common to good. Ducks farm at 14 cents. Pigeons \$1.25 a dozen for selected lots and 75 cents to \$1 for fair to good. Squabs in demand at \$1.75 to \$2.25 a dozen, but mostly selling at \$2. Western lead poultry coming now in good condition with a steady fair demand. Chickens at 13 to 14 cents, fowl 10 to 10 1/2 cents for choice and 9 to 9 1/2 cents for ordinary. Old roosters at 6 cents, ducks at 10 to 12 cents and turkeys fair to good at 10 to 9 cents. Live poultry in fair supply and a good demand for the best. Chickens at 11 to 12 cents, fowl 9 to 9 1/2 cents and old roosters 5 to 6 cents.

As the open season for ducks does not begin until next week, we still quote retail prices from cold storage stock. Canvases

back ducks \$3.50 to \$4 a pair, Mallards \$1.50 to \$1.75. Chicken grouse \$1.75. Beetle head plover \$5 a dozen, western upland plover \$4 to \$4.50. Winter yellow legs \$4.50 to \$5 a dozen, and summer \$2 to \$3. Reed-birds 60 to 75 cents, and peep 40 to 50 cents a dozen.

## Infertile Eggs.

The difficulties in the hatching season in bringing out the good broods are oftentimes the most discouraging feature of the poultry business. Many a man has become discouraged through poor luck in hatching, and the trouble seemed to be beyond him. He naturally laid the fault to the eggs, and in many instances this was right; but back of the eggs there was the climate, which is often responsible for infertility in eggs. The uncertainty of our weather in spring and summer makes it hard some seasons to hatch out the eggs in spite of every precaution. The eggs may have been fertile enough at the beginning, but vitality was low, and slight mishaps may produce disastrous results. When the thermometer drops twenty and thirty degrees within twenty-four hours one can readily understand how the delicate germ life of the eggs may be ruined. Suppose the setting hen should be off the nest at such a time for an undue length of time. The chances are that half the germs would be destroyed. In such sudden changes from hot to cold weather special attention should be given to the eggs. If the hen leaves the nest even for a short time it will pay to cover the eggs with a warm woolen cloth until the hen is about ready to return. This sometimes involves a good deal of watchfulness and work, but especially in the early spring it pays. We do not have so many of the violent changes that we would be kept busy covering the eggs in this way.

When the hens are laying out of the regular season, the fertile germs of the eggs are especially low in vitality, and a very small thing may destroy them. Thus, fertile eggs in March or April may be destroyed for all hatching purposes by a sudden chill that reduced the temperature of the egg only a few degrees. This might happen at any time when the sitting hen left the nest if the eggs were exposed to the chill, outside air. Consequently for spring and fall hatching the nesting eggs should be protected in some way. The nests should be made in some enclosed building, where, if necessary, artificial heat can be supplied. But keeping the warmth of the nests by covering the eggs with some woolen material is the best method of protection. The little trouble with this is that it involves labor of an unusual nature. But this can be minimized if the feeding is done at a certain hour every day, when the sitting hens will leave the nest to eat and exercise. A little training at the beginning of the hatching season will make the hens leave the nests at this time, and then return to them later.—James S. Wilson, Connecticut.

## Horticultural.

## Orchard and Garden.

Every man who has a garden should be prepared to use the spraying pump and the Bordeaux mixture on it. Nearly all the fungous diseases yield to this treatment. Rust or spot on beans or celery, or the blackberry or raspberry bushes, or the strawberry vines, root of grape and cherry, and many other troubles which annoy the amateur gardener and detract from the profit of the market gardener, will be prevented or checked by a spraying done in season, and if insect pests abound, it is easy to add the arsenical poisons to it to destroy most of them, or if they are sucking insects, like the aphids or plant lice, an emulsion of kerosene, or even a mixture of it, when the pump is so made as to keep it thoroughly mixed, will kill them. To neglect spraying an orchard, small fruits, fields or gardens now seems almost as bad as to neglect killing weeds, and the spraying pump should be a part of the equipment of every farm, or even the village lot, as much as the hoe or scythe, and if there are poultry on the place it will be needed in the poultry house more than once in the season.

John G. McNair of St. Louis is classed as the Peach King of Missouri. He owns six peach orchards, four in Missouri and one each in Illinois and Arkansas. In his orchards he has 294,000 peach trees, 85,000 apple trees and 11,434 pear trees. He has also 417 acres in strawberries. Mr. McNair expects to make quite an exhibit of peaches in the Horticultural building at the Buffalo Exposition.

One of the requisites to commercial success in either orchard or garden is convenient access to a good market. This is more important in the case of such vegetables and fruits as perish quickly after they are in condition to harvest, than with those that will bear long keeping and transportation. Thus Boston makes a good market for potatoes from Aroostook County, turnips from St. Andrews or apples from Missouri, and for many of the products of Florida and California, but the strawberries, lettuce and some others sell best when grown where they can

## DISPLAY OF CYPRIPEDEUM INSIGNE VARIETIES, EXHIBITED BY OAKES AMES. Kindly loaned by the Massachusetts Horticultural Society.

be put on the market in from ten to twenty-four hours after they leave the field. If a few from a greater distance sell at good prices when they are not to be grown here, it is owing to the facilities for quick transportation, and for preserving them in good condition on the route, and if there is a failure in either respect, the shipper usually fails to obtain satisfactory prices. This year in some parts of southern Tennessee and northern Alabama strawberries were left to rot on the vines at a time when they were selling at fifteen cents a quart in Chicago. They had over produced for their local markets, and had not transportation facilities to other markets. They would have done better to have confined their attention to other crops that they could have shipped to distant markets. This is one of the lessons that fruit and vegetable growers should learn, to adapt their products to their markets, or see that there is a way to reach the market with them.

There is little doubt that fungous diseases, like pear blight, apple scab and others, can be transmitted from the infected plants to sound ones by the visitation of insects, and by bees as well as others, yet the bees would not work much when the plants were not in bloom, or carry much infection from any part excepting the flower. The injury that might be done by bees in this way would be so small and the good that we know they do in removing the pollen is so great that we would not think of excluding the bees from the orchards for this reason.

It has been difficult to find a gooseberry that will do well in this country, all but the very small natives being subject to the mildew in ordinary soils, or unless where kept so poor as to yield but a little fruit of small size. But Mr. McFarlane, in an essay before the Tarrytown, N. Y., Horticultural Society, said that he had found Hyle's Golden Prolific tree from mildew, a vigorous grower and a heavy cropper, bearing fruit of enormous size and good quality. As his stock consists of twenty-four bushes six years old, he is not advertising them for sale. They are on an average six feet across, and have no especial care in watering or mulching, but all pruned each spring to take out old bushes and cut back young ones, and are syringed with hellebore and water about May 20 to kill off currant worms, which eat gooseberry leaves as well.

The State Board of Horticulture in California, while protecting their own fields and orchards, are indirectly working for the benefit of other States, as Massachusetts and the Philippines is now doing. This is the beginning of the year to April last they found trees, plants or fruits on ninety-five steamers and sailing vessels from foreign countries or from the Philippine Islands. The receipts consisted of 369 cases, boxes and bales of trees and plants; ninety-seven loose lots of plants, numbering from one to a dozen in each lot; 10,380 boxes of citrus fruits, principally limes and Japanese oranges; 2948 boxes of miscellaneous fruits; 7373 boxes of tomatoes from Mexico and "fonolula"; 5598 crates and sacks of onions from Australia. The above were carefully examined, and when found infested with insects or diseases not already in the State, were destroyed; when necessary, all other stock has been fumigated with hydrocyanic acid gas, and it has been arranged that all mail matter containing fruits or plants from Hawaii or the Philippines is sent to the postmaster at the capital of each of the Pacific Coast States, and by him submitted for examination to the State Board of Horticulture. All such packages when found to contain no dangerous insects are promptly forwarded to the addressee. When any package contains infested fruit or plants, the postmaster notifies the addressee and leaving the same until the State Board or commissioner can arrange with the addressee, or take such other proceeding as may be proper for the destruction thereof.

## Maine Farm Notes.

Farmers in this vicinity find themselves under as favorable circumstances as they could desire, so far as the elements are concerned. We have had seasonable rains and all kinds of vegetation are booming. Corn is large and unusually forward; it promises a bountiful crop. Apples are a failure. Potatoes do not stout well, for some reason; the tops are stout and green, but the crop will be light.

The prospect for a hay crop next year was never better than at this date. The warm rains have started the aftermath finely. Oats and barley are about on an average. Beans are generally good. I pulled mine yesterday, and they were bright and well podded.

On the whole, I do not think we farmers have any reason to complain, though there is time enough for a drought even now. I should like to fully endorse many things I read in your paper. In particular, yet there are so many articles to praise that I need not particularize.

D. H. THING.

St. Vernon, Me., Aug. 23.

Recent sales at Allen Farm are: Black mare, Atalanta Wilkes (2.29), by Guy Wilkes (2.15), in foal to Kremlin (3.07), to William A. Fearing, by Guy Wilkes (2.07); dam, Mayflower (dam of three in list), by Sweepstakes; brown filly, two years, by Kremlin (2.07); dam, Albene (dam of two in list), by Kentucky Prince, to R. Graham King, Laconia, N. H.

—The total shipments of boots and shoes from Boston this week have been 90,551 cases, against 97,571 cases last week. The total shipments thus far in 1901 have been 3,086,541 cases, against 2,812,170 cases in 1900.

—Wheat, including flour, exports for the week aggregate 6,006,809 bushels, as against 5,938,761 bushels last week (the record total) and 5,005,108 bushels in the week last year. Corn exports aggregate 523,883 bushels, as against 503,807 bushels last week, and 3,493,375 bushels last year. July 1 to date exports are 9,751,051 bushels, against 27,109,724 bushels last season.

Beef is quiet, but the best is fully sustained with light in over supply and rather easy. Extra sides 8 to 9 cents, heavy 8 cents, good 7 to 7 1/2 cents, light, grass and cows 6 1/2 to 7 cents, extra hinds 10 to 11 cents, good 8 to 10 cents, extra fore 6 to 6 1/2 cents, heavy 5 1/2 to 6 cents, good 5 1/2 cents, light 4 to 5 cents, backs 6 to 8 cents, ribs 9 to 12 cents, rounds 7 1/2 to 8 cents, rumps 8 to 12 cents, rumps and loins 10 to 14 cents, loins 11 to 17 cents.

—Muttons are rather better in demand, with veal short and framer. Spring lambs 8 to 10 cents, fall lambs 6 to 9 cents, muttons 6 to 7 cents, veals 7 to 9 cents, fancy and Brightons 8 to 10 cents.

—Bradstreet's reports exports wheat and flour for week aggregate 6,006,809 bushels, against 5,938,761 bushels last week and 5,005,108 bushels last year. Since July 1 exports aggregate 50,757,321 bushels, against 23,006,448 last year. Corn exports for week aggregate 523,883 bushels, against 503,807 last week and 3,493,375 last year. Since July 1 exports aggregate 9,751,051 bushels, against 27,109,724 last season.

—The shipments of dairy products from New York last week included 232 packages of butter to Liverpool, 1485 to London, all in refrigerators, and 200 to Bremen; 490 boxes of cheese to Liverpool, 1287 to Hull, 1022 to Manchester, 30 to London, and 200 to Glasgow; a total of 3807 packages of butter and 6922 boxes of cheese.

—The best sugar industry of Illinois Sugar Refining Company, located at Pekin, has been abandoned and no more beets will be grown. The owners have determined to turn it into a glucose refinery.

—What is said to be the largest apple deal on record in the United States was made in the sale of the Haseltine apple crop in Green County, Mo., for \$24,000. The sale includes 100,000 apples on 100 acres of orchard, which are estimated to have cost \$200,000, and about 30,000,000 apples. Four produce firms are the purchasers of the crop.

—World's wheat exports as called to Produce Exchange 10,792,000 bushels for United Kingdom and Continent. World's corn exports last week 2,630,883, against 3,780,807 bushels previous week, 4,402,375 year ago.

—The exports from Boston for the week ended Aug. 3 were valued at \$2,877,045, and the imports at \$800,289. Excess of exports \$1,076,756. For the corresponding week last year exports were \$2,108,800, and imports were \$1,415,322. Excess of exports \$793,478. Since Jan. 1 exports have been \$70,415,944, and imports have been \$49,000,108. Excess of exports \$20,415,836. For the same period last year exports were \$88,674,774 and imports were \$43,578,688. Excess of exports \$45,096,086.

—Steamships Saxonia and Tivonian sailed from Boston Saturday, carrying water ballast in preference to taking cereals to Europe at the present low rates.

—Texas oil is being offered to the pipe line companies as low as seven cents a barrel without any buyers, on account of the lack of facilities for handling.

—According to census figures of 1901, population of Canada is 5,338,881, an increase of only 505,444 over 1901.

—The shipment of live stock and dressed beef last week included 148 cattle, 12,200 quarters of beef from Boston; 405 cattle, 1565 sheep, 19,678 quarters of beef from New York; 953 cattle, 950 sheep, 1344 quarters of beef from Baltimore; 850 cattle, 900 sheep from Philadelphia; 315 cattle, 1000 sheep from New York; 1000 quarters of beef from Portland; 205 cattle from Montreal, a total of 10,213 cattle, 3044 sheep, 34,492 quarters of beef from all ports, 3294 cattle, 2219 sheep, 27,282 quarters of beef went to Liverpool; 4404 cattle, 454 sheep, 7100 quarters of beef to London; 144 cattle, 146 sheep to Glasgow; 440 cattle to Bristol; 300 cattle to Hull; 94 cattle, 125 sheep to Bermuda and West Indies.

—Western eggs now come in pretty good condition and are nearly up to Northern and Eastern in price. Nearby and Cape fancy brown bring 23 cents, but choice fresh can be bought at 18 to 20 cents and fair to good at 14 to 16 cents. Michigan are 16 to 17 cents, and Western selected fresh 15 to 16 cents, while common to good are 13 to 15 cents. Western dirties at \$3 to \$3.50 a case. Refrigerator eggs in fair demand at 14 to 17 cents for April fancy. May 15 to 15 1/2, and June packed at 14 cents. The stock in storage was reduced 5277 cases during the week, and now is 184,427 cases, against 142,317 cases at same time last year.

—The visible supply of grain in the United States and Canada on Aug. 24 included 26,007,000 bushels of wheat, 12,205,000 bushels of corn, 5,814,000 bushels of oats, 1,662,000 bushels of rye, and 317,000 bushels of barley. Compared with the week previous this is a decrease of 783,000 bushels of wheat, 578,000 bushels of corn, and an increase of 367,000 bushels of oats, 127,000 bushels of rye and 65,000 bushels of barley. One year ago it was 49,968,000 bushels of wheat, 7,400,000 bushels of corn, 5,668,000 bushels of oats, 734,000 bushels of rye and 317,000 bushels of barley.

—Pork is firm; lard firm; hams rather easy. Heavy backs \$19.25, medium \$18.50, long cut \$19.75, lean ends \$21, bean pork \$15.25 to \$16, fresh ribs 12 cents, corned and fresh shoulders 9 cents, smoked shoulders 10 cents, lard 10 1/2 cents in pails 11 to 11 1/2 cents, hams 12 1/2 to 13 cents skinned hams 13 cents, sausages 9 cents. Frankfurt sausages 9 cents, boiled hams 12 to 14 cents, boiled shoulders 8 cents, pressed ham 12 cents, raw lard 10 1/2 cents, rendered lard 10 1/2 cents, in pails 11 to 11 1/2 cents, pork tongues \$22.50, loose salt pork 10 cents, brisquets 11 cents, sausage meat 7 cents, country dressed hogs 7 1/2 cents.

—Traffic makes the exports from the Gulf ports and the Atlantic coast last week to include 261,000 barrels of flour, 5,125,000 bushels of wheat,

615,000 bushels of corn, 3620 barrels of pork, 10,864,000 pounds of lard, 23,022 boxes of meats.

—The world's grain exports last week included 9,799,969 bushels of wheat from six countries and 2,630,883 bushels of corn from four countries. Of this the United States furnished 6,006,809 bushels of wheat and 523,883 bushels of corn. A year ago 5,831,100 bushels of wheat and 4,402,375 bushels of corn from four countries, the United States supplied 2,855,100 bushels of wheat and 3,493,375 bushels of corn.

—Eastbound shipments of grain from Chicago last week were only 1,356,000 bushels, an increase of 65,000 bushels over the previous week and a decrease of 111,000 bushels from the same week last year. Flour shipments were 55,465 barrels, a decrease of 468 barrels from the previous week and an increase of 31,223 barrels over last year. Provision traffic increased 2463 tons, a gain of 8913 tons over same time last year.

## State and County Fairs.

## STATE AND GENERAL EXHIBITIONS.

|  |                  |
|--|------------------|
| Chicago Live Stock                       | Nov. 30-Dec. 7   |
| Illinois, Springfield                    | Sept. 30-Oct. 5  |
| Indiana, Indianapolis                    | Sept. 16-21      |
| Iowa, Des Moines                         | Aug. 25-31       |
| Manitoba, Winnipeg                       | July 28-Aug. 2   |
| Massachusetts Horticulture               | Oct. 1-2         |
| Michigan, Pontiac                        | Sept. 23-27      |
| Minnesota, Hastings                      | Sept. 2-6        |
| Nebraska, Lincoln                        | Sept. 2-6        |
| New Hampshire, Concord                   | Aug. 27-30       |
| New Jersey Interstate, Trenton           | Sept. 24-28      |
| New York, Syracuse                       | Sept. 12-15      |
| North Carolina, Raleigh                  | Oct. 21-28       |
| Ohio, Columbus                           | Aug. 26-Sept. 1  |
| Oregon, Portland                         | Sept. 2-6        |
| Pennsylvania, Bethlehem                  | Sept. 10-13      |
| Pennsylvania Horticultural, Philadelphia | Nov. 12-16       |
| Philadelphia Live Stock                  | Oct. 8-10        |
| St. Louis, St. Louis                     | Oct. 8-10        |
| South Carolina, Columbia                 | Oct. 28-Nov. 1   |
| South Carolina Interstate, Charleston    | Dec. 1-Jan. 5    |
| South Dakota, Yankton                    | Sept. 8-12       |
| Texas, Dallas                            | Sept. 28-Oct. 13 |
| Texas International, San Antonio         | Oct. 19-30       |
| Vermont, Rutland                         | Aug. 26-Sept. 1  |
| Vermont, Concord                         | Aug. 27-30       |
| Wisconsin, Milwaukee                     | Sept. 9-13       |

|                                     |              |
|-------------------------------------|--------------|
| Amesbury and Salisbury, Amesbury    | Sept. 24-30  |
| Barnstable, Barnstable              | Sept. 24-30  |
| Berkshire, Pittsfield               | Sept. 10-12  |
| Blackstone Valley, Uxbridge         | Sept. 16, 11 |
| Bristol, Taunton                    | Sept. 24-27  |
| Deerfield Valley, Charlestown       | Sept. 12-15  |
| Essex, Peabody                      | Sept. 17-19  |
| Franklin, Greenfield                | Sept. 18, 19 |
| Hamden East, Palmer                 | Sept. 17-18  |
| Hampshire, Amherst                  | Sept. 20-22  |
| Hampshire and Franklin, Northampton | Oct. 2-3     |
| Hingham, Middlefield                | Sept. 4, 5   |
| Hingham, Hingham                    | Sept. 24, 25 |
| Hingham, North Adams                | Sept. 24     |
| Housatonic, Great Barrington        | Sept. 25-27  |
| Marblehead, North Attleboro         | Sept. 10-12  |
| Marshall, Marshall                  | Sept. 18-20  |
| Martha's Vineyard, West Tisbury     | Sept. 17, 18 |
| Mid Essex North, Lowell             | Sept. 12-14  |
| Mid Essex South, Framingham         | Sept. 12-14  |
| Nantucket, Nantucket                | Aug. 28, 29  |
| Oxford, Oxford                      | Sept. 4, 6   |
| Plymouth, Bridgewater               | Sept. 11-14  |
| Spencer, Spencer                    | Sept. 11, 12 |
| Union, Union                        | Sept. 11-13  |
| Weymouth, South Weymouth            | Sept. 24-28  |
| Worcester, Worcester                | Sept. 17-19  |
| Worcester East, Clinton             | Sept. 11-14  |
| Worcester Northwest, Athol          | Sept. 2-3    |
| Worcester South, Sturbridge         | Sept. 12, 13 |
| Worcester West, Barre               | Sept. 26, 27 |

|                                      |              |
|--------------------------------------|--------------|
| Androscoggin, Livermore Falls        | Aug. 27-29   |
| Aroostook, Houlton                   | Sept. 4-6    |
| Aroostook, North, Presque Isle       | Sept. 10-12  |
| Bristol, Bristol                     | Sept. 4-6    |
| Cumberland Farmers', West Cumberland | Sept. 24, 25 |
| Cumberland, Gorham                   | Sept. 17-19  |
| Cumberland, Northern, Harrison       | Oct. 8, 9    |
| Durham, Durham                       | Aug. 27-30   |
| Eastern, Bangor                      | Aug. 27-30   |
| Franklin, Farmington                 | Sept. 17-19  |
| Franklin, North, Phillips            | Sept. 10-12  |
| Gray Park, Gray Corner               | Aug. 27-29   |
| Kennebec, Readfield                  | Sept. 24-26  |
| Kennebec, South, South Winslow       | Sept. 17-19  |
| Lake View Park, East Sebago          | Sept. 17-19  |
| Lincoln, Damariscotta                | Oct. 1-3     |
| Madawaska, Madawaska                 | Oct. 1-3     |
| New Gloucester, Upper Gloucester     | Sept. 18-19  |
| Oakfield, Oakfield                   | Sept. 18-19  |
| Oxford, Oxford                       | Aug. 27-29   |
| Oxford West, Fryeburg                | Sept. 17-19  |
| Pittsford, Pittsford                 | Sept. 17-19  |
| Pittsford, East Pittsford            | Sept. 17-19  |
| Richmond Farmers', Richmond Corner   | Sept. 24-26  |
| Sagadahoc, Topsham                   | Oct. 1-3     |
| Shapleigh, Acton                     | Oct. 8-10    |
| Somerset Central, Skowhegan          | Sept. 10-11  |
| Waldo, Waldo                         | Sept. 4-6    |
| Waldo-Penobscot, Monroe              | Sept. 10-12  |
| Washington, Penobscot                | Sept. 17-19  |

MAINE.

Androscoggin, Livermore Falls

Aroostook, Houlton

Aroostook, North, Presque Isle

Bristol, Bristol

Cumberland Farmers', West Cumberland

Cumberland, Gorham

Cumberland, Northern, Harrison

Durham, Durham

Eastern, Bangor

Franklin, Farmington

Franklin, North, Phillips

Gray Park, Gray Corner

|                            |             |
|----------------------------|-------------|
| New London County, Norwich | Sept. 17-19 |
| Windham County, Brooklyn   | Sept. 10-12 |
| Benson Valley, Naugatuck   | Sept. 1-2   |
| Berlin, Berlin             | Sept. 18-20 |
| Brantford, Brantford       | Sept. 18-20 |
| Chester, Chester           | Sept. 11-12 |
| Clinton, Clinton           | Oct. 2      |
| Danbury, Danbury           | Oct. 7-12   |



# MASSACHUSETTS PLOUGHMAN

BOSTON, MASS., SEPTEMBER 7, 1901.

A great week for those who love the moon.

The backers of Shamrock II. seem to appreciate the value of getting odds.

Art still has its tragedies, as has been shown recently by the fate of sculptor Kraus.

The Italian and the mosquito are united in the common bond of being bearers of malaria.

Of course there were no stones thrown at the recent meeting of the window-glass men.

The hay fever microbe is the present scientific Blodion.

How would it be if the horses at Revere Beach did their Sunday driving for their own amusement?

Harvard's new buildings are getting cleaned up, preparatory to an unusually large fall opening.

Chicago is now having a police investigation. In all such matters New York still seems to set the fashion.

To vote by machine or not to vote by machine is still one of the questions agitating the board of election commissioners.

What is this we hear? Applejack losing its old time popularity? What will become of local color in the once famous apple jack communities?

"Babies" says Motherhood, "should not be fed on seasoned dishes, salt meats, pastry, uncooked vegetables, unripe food, wine, and rich cake."

The substitution of slot for unlimited service telephones will bar out a good deal of conversation between Brookline apartment houses and downtown offices.

Life-guard Maffit Flaherty is still adding to his record at Revere Beach and is now into the twenties; to rescue somebody from drowning is almost a daily habit.

Are the laws enacted in some European cities against the trailing skirt responsible for the prevailing local elevation of that portion of feminine garmenture?

Minister Wn continues to add to the popularity of his nation. A cheerful countenance at the dinner table is worth any number of Boxers at the other end of creation.

General MacArthur's remarks since his return from the Philippines agree with those of many other men who have known the Filipino at home, even with a gun in his hand.

When millionaires sail on the same steamer records are likely to be broken in the smoking-room. This is because it is easier to break a record than it is to break a millionaire.

It is to be hoped that the failure of canoeist Murphy to bring the English cup to our own Mystic Lake is an omen of the failure of Sir Thomas to take the larger yachting trophy to his own side of the water.

The organ and the urchin seems to be a profitable venture, and one wonders if the combination is accidental or arranged in advance. At all events it adds life to Tremont street in the early evening.

New York has more women than men according to the latest census bulletin, but the fact will not prevent New York humorists from continuing to point their fountain pens at the preponderance of the fair sex in Boston.

A woman in New York State has won a case against another woman who had slandered her. If petty gossip were effected by the precedent the world would be much improved, even if conversation languished at the summer hotels.

What is perhaps the worst floral barbarity ever perpetrated in this city seems likely to stay in the Public Gardens during the rest of the summer; and all that it needs is a single word to transform it into a once very familiar soap advertisement.

The rector of Shakspeare's Church at Stratford-on-Avon is reported to have publicly scorned American coppers. Perhaps this is another example of cohesion between mutual interests and an effort to discourage the use of any American change smaller than a quarter.

It is reported that an American girl is teaching Madame Bernhardt English preparatory to the much discussed Bernhardt-Adams production of "Romeo and Juliet." As the performance is undoubtedly intended for American audiences, the more American the instruction the better.

It is reported that London newspaper men are greatly agitated over a recent decision of a leading paper to have its reporters cover their assignments in frock coats and tall hats wherever such garb is customary. Nevertheless, there is much to be said in favor of the scheme. The reporter ought to act like a gentleman and be received as such, and in London the frock coat is as much a matter of course as the sack coat on State street.

The weather bureau men are in convention. "Meteorology in the Public Schools" seems an absurd subject for the Boston delegate, however, when one realizes all the possibilities of interest in an exact study of the east wind—much more popular at present, by the way, than it will be a few months from now when the fickle public has forgotten its dog-day beneficence.

And now comes the rumor of a union of saleswomen, with the purpose of raising wages not only for themselves, but for the salesmen at the same time, and thus encouraging matrimony. The project does not look toward success. Unless the union succeeds in both objects the combined resources of the proposed salesfamily would make the woman the head of it, and that is not, generally speaking, an encouragement to matrimonial venturing.

The automobile is showing its value in a new form. Mr. F. C. Beach, the editor of the Scientific American, took his family to church at Stratford, Ct., last Sunday evening in his, and finding that the electric lights were not in running order, quietly

connected the wires with the battery on his carriage, lighted the church, went in and remained until the end of the service, and after the service was over and the people out, he disconnected the wires and went home, few people knowing to whom they had been indebted for the light which they had received.

We are likely to have abundance of peaches this year. The growing crop in Maryland, Delaware and New Jersey now is reported to be large and of very good quality. Those received thus far are not the best, as later varieties will be larger fruit and not hastened to market until as nearly fit as they will bear transportation. Hon. J. H. Hale of South Glastonbury, Ct., who has just returned from overseeing the picking and shipment of seven-fifty bushels from his orchard in Georgia, will begin next month to ship his Connecticut crop. He had seven hundred negroes employed in picking them, down there, and expended \$22,000 for crates and ice in shipping them. Now he expects to pick 35,000 bushels from his orchards in Glastonbury and 25,000 from his orchards in Seymour, which produce their first crop this year. From this farm most of the yield will go northward to North Adams and points on the Naugatuck and Housatonic lines. These orchards were started four years ago, and he calculates that the crop this year will nearly repay his investment in the 100 acres that he has there. He estimates the entire crop in Connecticut at 3,000,000 bushels. Not many of them will reach Boston, but lessening the demand elsewhere may result in lower prices here.

## The Hessian Fly.

Bulletin 194, issued by Cornell University at Ithaca, N. Y., tells of the ravages of the Hessian fly in that State this year. As the average production of wheat in New York for the past five years has been over 7,000,000 bushels a year, with a value of more than \$3,700,000, it estimates the loss by the fly this year at more than half the normal crop, or a money value of nearly \$3,000,000. They have found a few larvae in the university wheat fields each year for the past ten years, but not enough to do much harm. Last year they learned that the insects had multiplied to an alarming extent in some localities, and they advised sowing varieties that showed greatest resistance, and to sow not earlier than Sept. 20, or later than Oct. 1, but the late summer and early fall were so dry that wheat sown as late as Oct. 1 was infested.

Three fields near the university fields were badly infested, and the yield on them was estimated from a total failure on the poorer portions to eight bushels on better soils. The yield on university fields, sown Sept. 18 and harvested July 18, experimental plot 2.3 tons straw, 38.3 bushels of wheat per acre on Dawson's Golden Chaff; Jones' Square Head 1.9 tons straw, 28.8 bushels wheat; Early Genesee Giant 1 1/2 tons straw, 20 bushels of wheat; Poole 28.1 bushels wheat; Harvest Queen 22 bushels wheat; Gold Coin 27.3 bushels wheat; all these 1 1/2 tons of straw per acre. A large field of Gold Coin was estimated at thirty to thirty-five bushels per acre.

Arrangements were made with a number of farmers to test several varieties. In nearly all cases, which were nine in four, the Dawson yielded a good crop, and resisted the fly almost entirely. Where soil and conditions were favorable Gold Coin and Red Rover made fair to good crops, Genesee Giant, Turkish Red and Clawson Longberry with some others selected by the farmers were almost a total failure.

In places visited by the station representative five other varieties seemed to resist the fly. No. 3, Prosperity and Democrat, Red Russian and White Chaff Mediterranean. Many farmers are mowing their wheat, as the straw, timothy and clover is worth more.

They reach the following conclusions:

1. That wheat raising need not be abandoned, but the number of acres should be reduced until by reason of such reduction every acre sowed will be raised under superior conditions.
2. That the soil must be so well fitted and so fertile that a strong, healthy growth will be secured in the fall, though the sowing of the seed be delayed ten to fifteen days beyond the usual time. Such preparation of the soil will also help the wheat to recover from any winter injury.
3. That the Hessian fly injures the wheat more on dryish and poor land than on moist but well-drained, rich soils.
4. That thick seeding and vigorous growth tend to ward off the fly.
5. That the resisting power of varieties varies greatly. Those with large, coarse, strong straw are less liable to injury than weak-strawed and slow-growing varieties.
6. That there were at least six varieties grown in the State this season that were not appreciably affected by the fly, though numerous other varieties in the same neighborhoods were much injured. Of these only Dawson's Golden Chaff has been tested at the station, and this has been found to be a superior wheat for general culture.
7. That the other resistant varieties are Prosperity, No. 3, Democrat, Red Russian and White Chaff Mediterranean.
8. That farmers in this State cannot be induced to cut and burn stubbles with a view of destroying the insect, since the practice of seeding to grass and clover is almost universal, and burning the stubble, if possible to do so, would destroy the young meadow plants. Work is too pressing almost in mid-summer to justify destroying the volunteer wheat that comes from the harvest scatterings. Much may be done, however, by sowing early in August one or more strips on the side or sides of the field. The plants on these strips come on early and form ideal conditions for the laying of the eggs of the fly. Later, after the remainder of the field has been sowed, the strips are plowed deeply (using a skim or jointer attachment to the plow) fitted and sowed. This preventive measure is about the only one which is worth considering in addition to the late sowing of hardy varieties on well-fitted, naturally fertile soil, or soil made fertile by the liberal application of farm manures and commercial fertilizers. Much stress should be laid on the proper fitting of the land for wheat. Plowing should be done early—at least six weeks before sowing—to give abundant time for repeated working of the soil, in order to compact the sub-surface soil and secure a fine but shallow seed bed in which there has been developed by the tillage and the action of the atmosphere an abundance of readily available plant food. Manures and fertilizers should be kept near the surface, and the young roots encouraged to spread out in the surface soil, thus avoiding much of the damage by heaving in winter, and leaving the deeper soil for a fresh pasturage for the plants during the following spring and summer.

The Hessian fly was first seen in this country soon after the Hessian troops landed on Staten and Long Islands in 1776,

and were generally supposed to have been introduced in straw brought by them. It had probably reached most of New York's wheat-growing sections in 1825. More or less damage has been done by them every year for more than a century, but the worst years have been those of 1790, 1817, 1844, 1845, 1846 and 1877. The loss in western New York in 1846 was estimated at not less than 500,000 bushels. A period of unusual destructiveness began in 1890, and has caused in 1901 a greater loss than was ever before known by New York wheat-growers. In some sections it is at best 70 to 80 per cent of the whole crop, and to say that it averages 50 per cent. is a conservative estimate.

The fly scarcely needs to be described to wheat growers, but as it also works in barley and rye, we append their description of it. It resembles quite closely a small mosquito, being about one-eighth of an inch long, dark colored and with two wings. There are two breeds a year in New York, one working on winter wheat in the fall, and the next on same plants in the spring, each passing through the four stages of egg, maggot, pupa and the winged form or perfect fly. The eggs are of a pale red, usually laid in regular rows of three to five or more on the upper surface of the leaves of the wheat, or in the spring sometimes thrust beneath the sheath of the leaf on the lower joints. One female may lay from one hundred to one hundred and fifty eggs.

In from three to five days the eggs hatch, and the little greenish-white maggots crawl down the leaf to the base of the sheath, between the sheath and stem, bedding themselves in the latter, causing an enlargement there. The fall maggots work down the stalk at or below the surface of the soil. The spring brood work just above the first or second joint of the stalk usually, but sometimes nearer the ground. They feed about twenty days before they pupate, or enter what is called the "flaxseed" stage, as they then much resemble those seeds. The fall brood passes the winter in this form, and the spring brood remains in the soil until midsummer, or later under certain weather conditions, as they did in 1900.

The fly usually comes out in May, and the fall brood in late days of August or September. The fall fly is more inclined to migrate to other fields than those which come out in the spring. With favorable winds they may go considerable distances.

Luckily, there is a natural enemy in a parasite, wasp-like flies, which deposit their eggs in the bodies of the maggots and the "flaxseeds." They often succeed in destroying nine-tenths of the brood, which accounts for the flies being so abundant one year and almost none the next season.

The first indication of the presence of the Hessian fly is a darker green color of the leaves, and a tendency to stool out more freely. The leaves are also broader, but the central stalk is missing, having been killed by the maggot. Later on the plants turn yellowish brown and die wholly or in part. The spring brood attack the stems from the tillers that have escaped the fall insects, weakening them so that they usually fall before the grain ripens.

The insects are much affected by weather conditions, mild weather in October and November and a wet spring being favorable to them, while dry, hot summers cause the death of the early hatches, and a rainless August may retard the coming out of the fly, so that even the precaution of late sowing may fail to save the wheat from their attack.

Usually sowing after Sept. 25 in New York lets them get away before the wheat is large enough for them to work upon. Sowing narrow strips of wheat early for them to deposit their eggs on, say in August or about Sept. 1, and plowing these strips under when about four weeks old, or soon after the main crop is sown, may destroy nearly all the fall brood. If all wheat growers in a section would adopt these methods, and sow as late as possible in good soil on a well-prepared seed bed, the loss from the Hessian fly would be greatly reduced.

If the fly comes on in the spring in great numbers there seems no remedy but to plow up the entire field or cut it for fodder, as the use of insecticides would be impractical, and it is doubtful if they would kill the insect in any stage of development.

## The Metropolis of New England.

BY WILLIAM DURBAN, B. A.

(Being No. 4 in a series of papers published in the *Ploughman*.)

Some ardent American admirers of England, who are far more numerous in the United States than is generally admitted, are by their compatriots styled Anglophiles, or Anglomaniacs. But it is not only those who are apt to point with great pride to Boston as the "most English" of all American cities. This does not mean that there is anything at all British about the Bostonians. They are far more genuinely American than the New Yorkers. It simply signifies that Boston is, because of its greater age, necessarily more similar in structure and aspect to a European town than it would have been had it sprung up during the later period of American history. It is built in the old style, and thus only in its newer portions partakes of the modern rectilinear geometry of streets and avenues.

Boston is a city of which any nation might boast; and it is dear to the American heart because it is closely associated, as is Philadelphia, with the stirring passages of history involved in the making of the greatest nation on earth. The "City of the Puritans" will ever be regarded with veneration by Englishmen of the religious type as representative of the noblest traditions of both nations. Moreover, Boston justly claims to be the intellectual centre of the Great Republic. The oldest and best publishing houses are located there, and dotted about the State of Massachusetts, within short distances, are the spots where dwell Lowell, Emerson, Oliver Wendell Holmes, Longfellow, Thoreau, Wendell Phillips, Hale, Freeman Clarke, Agassiz, Julia Ward Howe, Hawthorne, Ticknor, Fields, Margaret Fuller and Whipple. The literary lions of the golden age of American literature nearly all dwell around Boston. Bay State alone would have outdone to make Boston intellectually famous, but she was a generation ago only one of the stars of a brilliant galaxy.

Thus with regard to whatever is historic, quaint, artistic and literary, Boston is certainly the most interesting of all Transatlantic cities to visit and revisit. Even as structurally regarded, it is not to be disparaged when compared with New York, Chicago or Washington, excepting in consideration of mere magnitude. It is not a booming commercial congeries of docks, warehouses and sky scrapers, and therefore lacks the phenomenal growth presented by typical Yankee towns. But for beauty of architecture and attractiveness to the pedestrian, the shopper and the social observer, Boston's Washington street, Tremont street and Water place will compete

with any thoroughfares in the world.

Although Boston is not one of the gigantic cities which have sprung up with the speed of the mushroom, and yet have attained the solidity of the oak, it is no mere village. In America a more diminutive hamlet is constantly termed a "city." The reason is that every little New England village knows that it is potentially a city. Nobody can ever tell whereunto a few log huts may develop in that wonderful land of progress. Boston is in the old nucleus (founded by our Puritan exiles), an odd, picturesque, unspeakably fascinating picture to every American who has never seen any of the ancient places in the old world of Europe. But it has long since burst the old boundary lines. The "Hub of the Universe," as the Bostonians proudly delight to call their home, is now far into the country districts. Many of the old, twisted, tangled streets have disappeared; but enough of these yet remain to make of Boston the most curious and interesting landmark in the States, if we except such singular survivals as Salem, Nantucket, Newport, and some of the famous old Virginian relics of the Elizabethan times round Charlottesville.

A great part of old Boston was demolished by the terrible conflagration of 1872, and its place has been taken in the downtown section by a wealth of magnificent street architecture. In Back Bay and the suburbs are costly residences, many of them in the elegant detached style which allows such an attractive display of roomy lawn and abounding foliage. Well may Boston claim the pre-eminence, amongst the cities of the new world, for its countless refined homes; its artistic adornments, both public and private; the cleanliness and good order of its streets; and its splendid social institutions, especially the finest Public Library in the whole world.

Boston has a history which its citizens delight to chronicle. Its settlement dates back as far as 1630. Ten years after the memorable landing of the Pilgrim Fathers from the "Mayflower" at Plymouth Rock, Winthrop and his associates moved across from Charlestown, which now forms a suburb of Boston. The old beacon which gives the name to Beacon Hill was erected in 1634 to alarm the people in case of invasion. The first newspaper in America was issued in Boston. It was the Boston News Letter, beginning on April 24, 1704. In 1706 Benjamin Franklin was born in a humble house which stood in Milk street. In 1765 the Sons of Liberty organized themselves under the "Tree of Liberty," which stood near what is now the corner of Washington and Essex streets. The Boston ladies formed themselves into an anti-tea-drinking society about 1770.

The memorable "Tea Party" occurred Dec. 16, 1773. A number of citizens disguised as Indians boarded several English ships lying at the wharf, and emptied 342 chests of the obnoxious tea into the harbor. The following year the harbor was entirely closed as a port of entry; and in 1775 began the struggle for independence, in which Boston and its vicinity took such an indomitable share. That struggle ended in a way which even the most patriotic of Englishmen do not now regret.

The famous spot called Boston Common is in reality a lovely little park in the very heart of the city. It affords that delicious shade, the gratefulness of which is only known to those who have learned what American summer heat means. Boston Common used to be, till 1829, the pasture ground of Boston. The famous Public Garden of Boston contains one of the most admired marble statues of the whole world of art, known as "The Maid of the Mist." By far the most striking memorial of Boston is the Bunker's Hill Monument at Charlestown. The Battle of Bunker's Hill took place here just outside the old city, June 17, 1775. The grand obelisk is 221 feet high, thirty feet square at the base and fifteen feet at the summit.

One of the most cherished of Boston archaeological curiosities is the old State House, constructed in 1747, and recently restored to its original form. From the central window, July 18, 1776, was proclaimed the Declaration of Independence. One of the most famous streets in all America is Tremont street. This is a sort of Holy Land. It contains the Old Granary Burying Ground, Tremont House, Park-street Church and the fine Baptist sanctuary known as Tremont Temple, where Dr. Lorimer ministers to one of the great centers of American congregations. Boston is the headquarters of American spiritualism, and it is also the headquarters of the head centre of philanthropy. One of the most impressively beautiful specimens of statuary is the Boston memorial to William Lloyd Garrison, the celebrated Emancipator. His statue stands in Commonwealth avenue. Under the life-sized white marble figure, seated in a chair, is a massive granite block, on which is chiseled the inscription, "My country 's the world, my countrymen all mankind."

The situation of Boston is marvelous. It stands in the innermost point of a vast concave stretch of the New England coast. On that romantic shore are set many of the most famous historic towns of which America can boast. Many manufacturing and commercial centres stud the same reaches of the Massachusetts coast line. Lynn, Salem, Chelsea, Nahant, Pemberton, Cohasset, call up memories of the past. Some of these places team with new life today. In the wonderful and beautiful "hinterland" of Boston are Jamaica Plains, Cambridge, Lowell, Auburn, Concord and Harvard. All these names are unspeakably precious to the true American soul. They are equally suggestive of the progress of the world's civilization.

The home life of the Bostonians is typical of the elegance and comfort which are bluer than American cities. Many of the ordinary domestic details are entirely different from those to which we are accustomed in England. For instance, the Americans usually dislike to see paper lining on the walls of their rooms. They like the plain timber, but it is often beautifully paneled and corniced and carved. Again, they intensely dislike the fashion of hinged doors. In nearly all good new houses all the doors in the whole establishment are let into the walls, rolling backwards and forwards on hidden castors. This is a beautifully convenient expedient. The American housekeeper delights in every kind of overhanging balcony, and in attachments exactly like the South African "steep," which is a raised platform running all along each side of the house in many cases, but at any rate on the sides fronting the different parts of the garden. But I should have remarked that our word "garden" is never used by Americans except to denote what we term a vegetable garden. What we call a flower garden is universally styled a "yard," on the other side of the Atlantic. This implies something historically significant. The early settlers had no time for the cultivation of flowers, and

simply enclosed their dwellings in a "yard" piece of ground by rough rails.

The action of Mr. C. D. Borden of Fall River, in refusing to join with other mill owners to cut down wages of the operatives, and even granting an increase in his own mills, and his purchase of the surplus stock of print cloths held by the other mills at the market price or even at a fraction higher, put an end to what might have been a long and severe struggle between capital and labor in that city, which might have been extended to others later on. This is not the first or the second time that he has done the same act of purchasing all the surplus stock that had accumulated and was being used as an excuse for reducing the hours of employment or the wages of the operatives. He says it has been a matter of business with him, and that he has found his profit in these transactions, but the fact remains that by such action he has kept many at work at living wages instead of suffering the privation that so often follows the strike. And by a different course he might have accumulated wealth enough to build public buildings or endow public libraries and colleges, and had the grateful people erecting monuments to his memory as they looked at them, and forget that this price had been wrested from the honest earnings of the poor working class. When there are monuments to be built, we hope the mill operatives will not forget their debt to Mr. C. D. Borden.

General discussion of the end, toward which an ideal school system should point its endeavors is the first step toward such a system, as well as good evidence that the present programme of education is not all that it should be. The public school is the most important factor in making the future of the country, and no effort should be spared in sifting all theories and putting the best in operation, even if it changes the present system from top to bottom. The ideal system will have no place for wasted energy in the accumulation of patches of learning that neither unite to make a complete garment nor influence the scholar to seek for more material on his own account of like texture with the patch.

The Public Library is approaching a semi-centennial with a comfortable space of time intervening for all good Bostonians to tabulate and ponder over the many reasons which they have to be proud of it. Such a process of thought ought to result in many quarters in a financial support that would start the institution in its second half century with a greatly increased power to work out its ideals of usefulness.

Strike or no strike, a contract is worth more than the paper it is written on, and the sympathy that leads one labor organization to break its contracts in order to encourage another, already on strike, costs the entire body a more than equivalent amount of sympathy from the general public.

One of the best signs of the growing importance of practical estheticism in modern life is the reorganization of the Lowell School of Design and its coming start upon a regular three years course, with the purpose of graduating thoroughly equipped designers.

## The General-Purpose Cow.

The habit of speaking of the general-purpose cow sometimes leads people into classing with this animal the no-purpose cow. The latter animal is in evidence on a great many farms, and it has done more toward injuring dairy and the cattle business than anything else. The no-purpose is much like the mongrel dog or the barnyard fowl. Neither has any particular breed possibilities or capabilities. They exist because they are the products of a lazy, careless system. They do not help their owner much, but tend to discourage him with his life.

The no-purpose cow is the product of indifferent systems of farming, and it is an animal which is neither good for milk nor beef. She is usually a good feeder, an excellent feeder, in fact, but not much of a producer. It is astonishing sometimes to know where the food goes that she eats, for it is converted neither into fat, flesh nor milk. It must make bone, muscle or sinew, for the flesh of the animal is generally tough enough when eaten.

Now, the general no-purpose cow is a cross or type intermediate between the beef and dairy type. This animal, strictly speaking, is the product of carelessness and indifference, and is not the outcome of chance or accident. She has been bred for a dual purpose, and if she comes up to anticipations she is a good milker and a good beef-producer. While not as good as the best beef animals or the finest dairy cows in producing flesh or milk, she nevertheless possesses the ability to partake of each to a considerable degree. She is eminently adapted to the general farmer who wishes milk, and later a fat cow for the shambles, with calves which will produce good veal in a short time from birth. It may not be generally known, but it is more difficult to raise such an animal than a typical beef or dairy cow. The danger, however, comes in with the no-purpose cow. In trying to secure a good general-purpose animal we may stumble upon the former. This should be avoided in every possible way, for the investment would prove as unsatisfactory as any possibly could on the farm.—E. P. Smith, Ohio.

## Northern New York Notes.

Our hot, dry weather of July 10-27, during which time an immense quantity of hay was harvested in fine condition, was followed by a spell of warm, wet weather which retarded late haying and early harvesting. Oats ripened off too fast by the dry weather, and then damaged by wet weather in harvesting, many new fields laying a full week or more after cutting before getting enough sunshine to cure them.

Potatoes and corn were late all through the early part of the season, but the warm, wet weather is pushing them rapidly forward, and late potatoes bid fair to be a good crop if rust or blight do not attack them. Early potatoes did not amount to much. Apples are almost a failure. Pastures have been revived by late favorable weather and fall feed is excellent, so we are getting quite a good flow of milk.

I. L. SHIELDON.

Ellensburg Depot, Clinton Co., N. Y. Aug. 26.

Krinklewood (2.19), one of the new performers for Krenlin (2.07), was bred by J. R. Farnum of Waltham, Mass., who owned the game race stallion Commonwealth (2.22).

L. J. Cote of Berlin, N. H., is so well pleased with the Jerseys that he purchased from Hood Farm, Lowell, Mass., last spring, that he has made a second purchase of two cows. Both these cows are bred, and they and their calves, if heifers, should mix well with the promising bull Mr. Cote secured in his previous purchase.

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### Poetry.

"A FOUR-LEAVED CLOVER."  
What seek you, my maid, my pretty maid,  
With the wistful eye, the nut-brown braid,  
Where the rose-red clover blooms and blows,  
The yellow honey bee comes and goes,  
And the tangled grass is long and sweet,  
A maze of green for your little feet.

A four-leaved clover? O foolish child,  
Was ever a summer dream so wild:  
A garden of luck—a charm 'gainst fate?  
Youth and beauty have only to wait;  
For happiness happens, so they say,  
And blossoms come in the month of May.

Down by the stile in the shadowed lane  
There is some one watching all in vain,  
For a slender shape of girlish grace,  
A sunny smile and a flower-like face;  
Search no more in the rose-red clover,  
Fate away to your waiting lover.

"SHEILA."

### WEAVING.

Sometimes He gave me threads of gold  
To brighten up the day;  
Then somberly, so bleak and cold,  
That change the gold to gray;  
And so my shuttle swiftly flies  
With threads both gold and gray,  
And on I toil till nightfall dies  
And fades in night away.

Oh, when my day of toil is o'er,  
And I shall cease to spin,  
He'll open wide my Father's door  
And bid me rest within.  
When safe at home in heavenly light,  
How clearly I shall see  
That every thread—the dark, the bright—  
Each one had need to be.

—Christian Advocate.

### THE NIGHTINGALE.

The silence is no more; 'tis shattered by  
A frenzied scarp from a feathered throat.  
Or is it a scarp drifted down the sky,  
The dreaming earth with sudden glory smote?

I know not; 'tis it ecstasy or pain,  
Or saved love, or unfulfilled desire,  
That, crystallizing, falls in silver rain,  
And turns a bird's breast to an angel lyre?

O wizard-word, dividing all the dark!  
O wonder-bird, that seeks night's sheltering wing!  
Leaving the dark to the ambitious lark,  
When all the world's awake to hear him sing

Wherefore so humble, master of thy art?  
O peerless improvisator! say,  
Alme! the answer comes from mine own heart:  
—The songs of sorrow are not for the day.

—M. Hedderwick Browne in Chambers' Journal.

### THE MURMURING SONGS.

As on some lonely land  
In silence one may stand,  
And hear afar  
The sea roll on the shore  
In muffled solemn roar,  
With wild winds moaning o'er  
The harbor bar;

So they within the soul  
Hear muffled music roll  
Who watch and wait—  
Where fates are blowing free  
O'er life's vast troubled sea—  
Wond'ring what is to be  
The future great!

Low are the murmuring songs;  
Throb they with human woe;  
For sorrow sad;  
Wild melodies unknown;  
Yet they who hear, alone,  
Know goodness will atone,  
And they are glad.

—Charles W. Stevenson, in The New York Observer.

### WIND OF THE SOUTH.

Wind of the South, take this message, and bear it  
Afar on thy pinions,  
Over the old red hills and the land of the long  
Revered pine—  
Toward hundreds of leagues to the Snow-  
King's wide dominions:  
Car unto her that I love, O Wind, this message  
Of mine.

Waver it into her ear when the errant birds, re-  
turning,  
After about her feet and tales of the spring-  
time tell;  
Or the word from me while the sunset's  
beacon is burning,  
Then, in the gathering dusk, she waits for the  
twilight bell.

Thou of Austral isles and the palm tree's magi-  
cal glory;  
Thou of roses fair and of seas where the  
white sails shine—  
Car unto her, O Wind of the South, this mes-  
sage of mine.  
William Hunt Hillier in The New Lynnpoet.

It is the sea. It is the sea,  
In all its vague immensity,  
Sailing and darkening in the distance,  
Gulfed by all the winds that blow,  
The white ships haunt it to and fro,  
Like spirits on the confines of existence.

—Saturday Evening Observer.

Truth crushed to earth shall rise again,  
The eternal years of God are hers;  
But error and wrongdom will in pain;  
And dies amid her worshippers.

—God's Revivalist.

I've pawned my watch a hundred times,  
In 'most as many lands,  
And yet, forsooth, I say in truth,  
It never changes hands!

—Philadelphia Record.

## Miscellaneous.

### Lady Connie's Plunge.

"What chance?" gasped Lady Connie, taking her fair, disheveled head out from among the cushions of her boudoir lounge, and drying her tear-stained eyes with an absurd little gossamer handkerchief; "what chance has a girl—a mere girl, who has only been for a season and a half—against a married woman like Nita Le Queense?"

"None at all," said her friend, a rather plain, sensible young woman, with sporting tastes and tailor-made garments. "Not the ghost of a chance!"

"Yet, she's over thirty—and makes up!" said Lady Connie viciously.

"Men prefer women over thirty," said Molly Verdon sententiously, "and I am inclined to believe that they lean to make-up."

"Her waist is at least six inches larger than mine," Connie persisted.

"She is of the voluptuous and redundant type, I grant you," returned her friend; "but men like that, too."

"Her boots are five and her gloves seven."

"She is given to pedestrianism and drives four-in-hands that men adore that kind of thing," returned Molly, lighting a cigarette. "My child, what perfect tobacco!"

"Captain Lorriker gave me the box when he came home invalided from Africa, and—"

"You got so chummy?"

"He was laid up at his aunt's in Belgrave square, and—I visit there, you know."

"Or you did just then, and you used to drop in and spend the morning and afternoon, and sometimes the evening, reading and singing and playing to the wounded hero?" Molly made a little bit of a grimace.

"It was only Christian charity," said Lady Connie with dignity. "He had a splinter of a shell in the muscles of his ribs on the right side."

"And little Connie thought that an arrow, skillfully implanted in the left side, might serve as a counter irritant?" Molly exhaled a thin blue cloud of Turkish vapor and smiled at the water colors upon the wall. "Now, Captain Lorriker is well."

"Almost; only he gets awful attacks of cramp, and turns blue."

"Does he?"

"Every now and then. It has something to do with the water in South Africa. He vows he will never drink another drop as long as he lives."

"It's the kind of oath you can really rely on a man's keeping. But, tell me one thing. While you were playing, not sister but cousin-in-mercy where was the Le Queense?"

"In the Riviera. And Fred—I mean, Captain Lorriker—admitted to me that there had been what he called 'a slight entanglement,' and promised to steer clear of such things for the future."

"And you believed him? Goose!"

"And then," went on Lady Connie, rising to her feet and beginning to walk up and down over the Morris carpets of her sanctum, her Liberty draperies trailing, her gold hair disheveled, her cheeks and eyes flaming with indignation, and her fingers nervously wrestling with the clasp of her Egyptian silver griddle; "then she came back. Oh, it was degrading! She just held up one of her fingers—gave me one look—and—"

"And he fell to heel like the well-trained retriever he is. The Le Queense is famous for breaking in men. I rather admire her for it."

"D'you? Well, if you're going to lunch with me at the Dips Club, you will have the pleasure of seeing them together. Both are members, you know."

"I thought the rules separated the sexes at feeding time?"

"Nominally. But after the soup they draw the curtain that divides the Ladies' Restaurant from the Gentlemen's Grill, and—"

"Fusion is the word. I should like all things to see it. Why did you never ask me before?"

"Because I never joined until I went in for swimming," retorted Lady Connie.

"And now you're one of the cracks, aren't you?"

"I've won some races and gained a bracelet for the high dive."

"Does she—I'll call the Le Queense the Ogress, because she has such an endearing little way of crunching eligible young men up, body and bones—"

"Does she, as the Americans say?"

"Swim? Like a bladder of air!" said Connie disgustedly. "Wallowing is the word for it. See here!" She puffed out her cheeks and waved her arms, and gave, on the whole, not too exaggerated imitation of the aquatic frolics of the lady in question, and Molly shrieked with laughter.

"Women are never humorous unless they're jealous," she said, wiping her brimming eyes when the performance was over.

"Jealous? Do you suppose?" Connie was beginning, when the other cut her short.

"Jealous? Of course you are! And, if you want to cut out your hated rival—old I in the water. Don't you have aquatic show days, when the male club members race in the big swimming bath?"

"And they went together to the 'Dips' Club, and lunched at the very next table to Mrs. Le Queense, and she was very kind and condescending to Lady Connie—so much so that Lady Connie would have given worlds to be able to hurl a cutlet at her rival's head and challenge her to a duel with pickled forks. Then, just before the second course, the curtains dividing the Gentlemen's Grill from the Ladies' Restaurant flew apart—and Freddy Lorriker arose and drifted with the tide in the direction of his enchantress's table."

"There's your little girl, Tippy!" said the enchantress, who had nicknames for all her victims, as she haughtily motioned the captain to an opposing chair. "Looks washy and lovey, doesn't she? Oh, you cruel man!" She shook her finger playfully.

"Hang it, Nita!" protested the slave, turning as scarlet as his mistress—poor Connie called it "auburn"—"you're too bad! She—she heard what you said, I'm sure she did."

"And then?" The enchantress growled her artfully-diminished eyebrows.

"Oh! and then—y'know jolly well," cried the miserable Freddy, whose power of repartee was as limited as his power of resistance. "She'll be hurt. You women are so jolly fond of hurting one another."

"But the eyes that met his next minute were untroubled—the face of Lady Connie perfectly serene. "How do you do?" she nodded to the captain. "Are you quite well again, and shall we see you at the bi-monthly frog match?"

"Frog match?" was the newly invented term for a club swimming contest.

"Oh, yes!" returned Freddy brilliantly. "That is—hope so! Though I've no cause to be very fond of water—after South Africa."

"But there are no dead horses or Boers in our swimming bath!" said Lady Connie, and the high dive is the best anywhere. Twenty feet deep that end, you know. Do try it one day, Mrs. Le Queense! It's perfectly heavenly! You run right out to the end of the board, pose yourself, stave your eyes, and down you go, like—"

"Stone!" suggested Freddy Lorriker.

"Like an arrow," corrected Lady Connie. "Then she gave a little nod to the enchantress and another to Freddy and tripped away, leaving two images before the mental vision of the warrior, one being a fair, slender, virginial form clad in clinging garments of pale blue and white, with a jaunty cap on its golden hair, poised for a pick-like light; the other that of a brunetted rather efforescent personality and pronounced embonpoint, balanced awkwardly on the end of an elastic plank. He writhed a little at this, and excused himself by saying that he had a twinge of his African cramp."

"Little cat!" thought Mrs. Le Queense, noting the labored lie and reading Freddy like a book. And being a clever woman she then and there formulated her mental vow never to enter the club swimming bath under any possible circumstances. Had Lady Connie known of this resolution, her hopes would have fallen to the ground. But she remained in ignorance—and was happy.

The next frog match was for male club members, ladies being present on the balconies overlooking the swimming bath by invitation.

"So I must wait for my revenge," she said to Molly Verdon, as they sat together, leaning on the gilt balustrade and watching the aquatic gambols of the sterner sex (arrayed in complete suits of light flannel, he explained, in deference to the proprieties).

"There is the Le Queense," said Molly, "kissing her hand to a man in a striped mauve swimming suit. Ah, it's Captain Lorriker!"

"And he's going in for the thirty yards under the water race," said Connie anxiously.

"Don't be anxious," said her friend. "Captain Lorriker is not inclined to be apologetic, like that stout man in the Guards. I feel really anxious about him. Why, he is puffing and blowing already like the sea lion at the Zoo."

"Ah! they're off!" cried Mrs. Le Queense, as the four dark darters who had harvested my grand sub-aquatic journey. The guardsman came up to the surface sporting hideously but he had accomplished three yards; two of the others gave in about the middle of the course, but Freddy held on and won amid applause.

"And the prize—a diamond frog—and he will give it to her!" thought Lady Connie, viciously darning her red under lip with one small white teatooth. "Oh, if I could only tempt her in next Ladies' Frog Match—I should—I don't quite know what I'd do, but it—would be something that should break her spell upon him, and bind him to me forever!"

"She did it up another minute. Never was such a lucky chance, as Molly Verdon said."

"Because Freddy, foolish Captain Freddy—Freddy with triumph and the smiles of a prince on his face, who means to have the diamond frog—Freddy essayed the high dive."

"Oh, I wish he wouldn't!" moaned Lady Connie, as he belov'd swarmed up the ladder that led to the elastic platform that overhung the deep end of the bath.

"Why not?" snapped her friend, unsympathetic for once.

"Because of his wound," moaned Connie, "and the cramp—that awful South African cramp! Suppose he swallows some water, and it isn't quite nice!"

"Light!" said Molly, shudderingly.

"And that brings it on. You know he has sworn off water since that South Africa—"

"Splish!" Freddy had done the high dive.

"Capital!" cried all the spectators.

"Gravo!" cried Mrs. Le Queense, applauding from her balcony. "And what a long time he is stopping under water, too! I had no idea Tippy could show off like that."

"He'll pop up now!" said the guardsman.

"But Freddy did not pop up, and a horrible moment went by. Then a man shouted something and Mrs. Le Queense tilted and then screamed."

For before any of the paralyzed club members had roused to action, Lady Connie had risen, torn off her hat and jacket, sprung upon her chair, stepped through to the broad ledge of the balcony and dived.

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and eager to devour the sweet morsel she was holding, the mother prayed to the Great Spirit to deliver her precious baby in any wonderful manner possible to himself.

"The Great Spirit was quick to answer this cry of the poor Indian, and instantly Red Bird turned into a tiny red squirrel, but as he sprang from the grasp of the woman, four of her claws left long black marks on his back, and all of his descendants have these marks, that the Indians may know their relatives and not harm them."

Frank laughed and said he should always think well of the Ogress, for the sake of little Red Bird.

—Ruth Raymond.

### Old Mac's Fright.

Before the civil war, says a Youth's Companion contributor, my father owned a large plantation in Virginia, and among his retinue of slaves was a faithful black boy named Mac, who had been with my father many years. He had appointed himself my body-servant, caring for and amusing me from the time I was allowed to leave my old black "mammy."

"Old Mac," as he was called, had a wonderful imagination. He used to invent weird stories of ghosts and hobgoblins, and his thrilling adventures with these spirits of the air were a continual source of terrified delight to me. He was exceedingly superstitious.

As I grew older, I found more pleasure with the horses and dogs, and Old Mac gradually fell into disuse, as far as my amusement was concerned. Then I was sent away to school, just as I was beginning to appreciate the queer old character.

On one of my visits at home I went on foot to spend the evening at a house of a neighbor, Mr. Carleton, and Mac accompanied me, as I enjoyed listening to his quaint "dilated stories," as well as to the old negro melodies, which he sang in a clear, sweet tenor.

We left the Carleton place at ten o'clock—it was a bright, moonlight night—and started briskly for home. As we approached a small graveyard, which lay between my father's place and the Carleton plantation, Old Mac became very quiet and watchful, looking about him fearfully and starting at every shadow, as if he expected an attack from some hidden enemy.

When we reached the burying-ground I heard voices on the other side of the wall which enclosed the place, and paused to listen. Mac, trembling from head to foot, grasped my arm, and begged me in a hoarse whisper not to stop—the voices were "bad," he said.

At that moment the murmured words became clear to us, and we heard from the other side of the wall: "Dis un's yours, dat un's mine, dis un's yours, dat un's mine."

Raising myself to a position where I could see what was going on, I was about to make my presence known, when Old Mac, unable longer to control his fear, uttered a yell, took a firm hold on my arm, and saying, "Fo' de Lawd's sake, massa, run!" tore down the road as if pursued by a nameless terror.

I could not understand what had frightened the old man so, and tried to stop him, but his terror carried him clear to the front door, where he dropped on the steps, panting with the exertion, and his eyes were full with terror as he gazed at me.

"De debbil in dat graveyard, pickin' out de angels! Dey'd 'a' got us sho' if we hadn' run!"

You may appreciate how funny this was to me, as I had seen nothing that looked like "God and de debbil," but only two rather frightened negroes, dragging their bodies which they had stolen from a nearby orchard.

The Resting-Places of English Sovereigns.

They do not sleep together, those lofty ones who have worn the crown royal of England. They lie far apart in many instances: some by the banks of the Loire in sunny France, some under blue skies of Normandy, and others scattered here and there within the stately cathedrals and great chapels of their own island kingdom.

Fathers and sons are separated in many cases, and husbands and wives do not always lie side by side, yet perhaps they slumber as soundly as though their dust mingled together.

The bones of the stout Norman, who was called William the Conqueror, crumbled for many a long century underneath the roof of the church of St. Stephen at Caen, Normandy. Restless in life, the great Conqueror could not find rest even in death. When his body was brought for burial to the abbey church of his own build, a Norman knight stood up and forbade the interment until he had paid for the land which he claimed had been forcibly and wrongfully taken from him. Nor was this the last disturbance of the monarch's remains, for in 1562, during the religious wars in France, his tomb was opened by the king's soldiers, who, enraged at not finding the jewels they had heard of, turned out his bones from their resting-place and scattered them right and left. Subsequently they were collected, and some of them replaced in the coffin.

Ruled the first bachelor king of England, who was slain by Walter Tyrrel's arrow in the New Forest, found a resting-place in the choir of Winchester Abbey. His tomb is a plain one and is still in good preservation.

His brother, Henry I., youngest son of the Conqueror, died while absent in Normandy, but his body was carried to England and interred in the abbey he had founded at Reading. In Berkshire, though it seems that the king's bowels, brains, heart and tongue, by a strange fancy of dissection, were buried at Rouen, King Stephen and his queen, Matilda of Boulogne, lie quietly side by side in the abbey church of Faversham in Kent.

The first two Plantagenet kings, Henry II. and Richard I., sleep far away from England, at Fontevault, on the banks of the Loire, the burial place of the old Angevin counts. It must be remembered that at this period the English kings were sovereigns of a large part of France, and this accounts for the interment of these two kings away from their island kingdom.

King John's tomb can be seen in Worcester Cathedral, a well-preserved and costly monument, surmounted by his effigy. It is the earliest sepulchral effigy of an English king to be found in England. His queen, Isabella of Angoulême, singularly enough, lies with the earlier Plantagenets at Fontevault.

Henry III. was buried in Westminster Abbey in St. Edward's Chapel, so-called. He was the earliest English monarch to be given sepulture in that historic abbey. His son, the first Edward, also found interment there by the side of his first wife, Eleanor of Castile.

The unfortunate Edward II., who was murdered at Berkeley Castle, was buried at Gloucester Cathedral, not far from the place of his murder, and where a son of the Conqueror, Duke Robert of Normandy, was already interred. Edward's good queen, Philippa of Hainault, found a resting-place in St. Edward's Chapel at Westminster.

The murdered Richard II., son of the gallant Black Prince, was at first privately interred in the Church of the Friar Preachers at Langley, about thirty miles from London, but in 1447, by order of Henry V., the body was exhumed, and with imposing obsequies conveyed to Westminster Abbey, and placed in a royal tomb built of stone and gilded brass.

King Henry IV. and his queen, Joanna of Navarre, are buried in the chapel of St. Thomas at Becket in Canterbury Cathedral, near the tomb of the Black Prince. Their splendid altar tomb is admired by every visitor.

Beneath a splendidly sculptured tomb in St. Edward's Chapel at Westminster sleeps all that is mortal of a victor of Agincourt. Henry V. lay in the tomb at Windsor, was also buried there, being the first of the English sovereigns to find a tomb within that royal residence. Near by him, at the east end of the north choir, under a plain stone marked with his own names, lie his triumphant enemy, King Edward IV., and his queen, Elizabeth Woodville.

The boy king, Edward V., who was smothered in the Tower, found a humble grave at the foot of the Tower stairs. In the reign of Charles II., his bones, with those of his little brother, Richard of York, were discovered. By the king's orders they were collected and placed in a sarcophagus of white marble, which may be seen in the south aisle of Henry VII.'s Chapel at Westminster.

Richard III. was interred in the Church of St. Mary, belonging to the order of Grey Friars, the principal place of worship in Leicester. Some years afterward his successful rival, Henry VII., caused a tomb of many-colored marble, surmounted by a marble effigy of the warrior king,



